

# पंडित रघुवीरदास

(Dear to the World : The Science of Plant Life)



Agri-History Bulletin No.5  
Asian Agri-History Foundation



# रिश्तावाला

(Dear to the World: The Science of Plant Life)

Translated  
by  
**Nalini Sadhale**

Commentaries  
by  
**Nalini Sadhale and Y L Nene**

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### About the Translator

Dr Nalini Sadhale obtained MA in Sanskrit with distinction from the University of Poona, Pune, India and PhD in Sanskrit from Osmania University, Hyderabad, India. She has had a distinguished professional career and she retired in 1994 as Professor and Head of the Department of Sanskrit, Osmania University, Hyderabad. She distinguished herself by serving on several prestigious organizations, committees, and boards. She worked as Sastra Chudamani Scholar of the Rashtriya Sanskrit Samsthan, New Delhi, India. She has several publications which include Katha in Sanskrit Poetics, Sanskrit Verse Translation of Hindi Tulasiramayana, and Translations of Urvashi and Vasantsena from Sanskrit to Marathi, Sitajosyam, from Telugu to Marathi and Surapala's Vrikshayurveda and Krishi-Parashara from Sanskrit to English. She was recently honored by the Asian Agri-History Foundation with the AAHF Gold Medal-2002 for her significant contributions to the Indian agricultural heritage.

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## Foreword

The Asian Agri-History Foundation (AAHF), a non-profit trust, was established and registered in 1994 in Secunderabad, India, to facilitate dissemination of information on agricultural heritage to promote research on sustainable agriculture in South and Southeast Asian regions. These regions provided food security to its population for several millennia, with occasional famines that too in limited pockets, primarily due to drought. Farmers here had evolved some of the most sustainable agricultural management techniques suitable for different agroecoregions. There is a great deal to be learned from the traditional wisdom and the indigenous, time-tested technologies that sustained the farmers of South and Southeast Asia in the past. One of the major objectives of AAHF is to disseminate information on ancient and medieval agriculture by translating old texts/manuscripts into English and publish these translations with commentaries on the scientific content of the texts. The aim of these commentaries of the experts is to stimulate research to verify old practices.

The AAHF has so far published four bulletins: Vrikshayurveda (The Science of Plant Life) by Surapala (c. 1000 AD), Krishi-Parashara (Agriculture by Parashara) (c. 1<sup>st</sup> century AD), Nushka Dar Fanni-Falahat (The Art of Agriculture) (a Persian manuscript) by Dara Shikoh (c. 1650 AD), and Kashyapiyakrishisukti (A Treatise on Agriculture) by Kashyapa (c. 800 AD). This bulletin has the translation of a Sanskrit manuscript written by a scholar, Chakrapani Mishra, around 1577 AD. He

worked under the patronage of Maharana Pratap, the great ruler of the Mewar region of Rajasthan in Western India, who refused to surrender or be a vassal of the Mughal ruler Akbar, despite having lost substantial territory of Mewar. Even when his kingdom remained a small territory in the Aravalli mountain ranges, Maharana Pratap offered his patronage to scholars such as Chakrapani Mishra.

Who was Maharana Pratap? According to Devilal Paliwal [Maharana Pratap–Mahan (in Hindi) published by Rajasthani Granthagar, Jodhpur, Rajasthan], Maharana Pratap was born on 9 May 1540 as the eldest son of Maharana Udai Singh (1538—1572), who was the ruler of Mewar in Rajasthan. Maharana Pratap succeeded his father and ascended the throne of Mewar on 28 February 1572. A substantial territory of Mewar had already been conquered by Akbar in 1568, and constant pressure on him to surrender continued. Through the rest of his life, Maharana Pratap successfully protected his territory against repeated invasions by Akbar's armies. Finally in 1586 Akbar decided to leave Maharana Pratap alone. During his reign, Maharana Pratap developed Chavand as his capital and his kingdom flourished from 1586 until his death (19<sup>th</sup> January 1597). Maharana Pratap protected his own honor as well as that of his people all through his life.

And who was Chakrapani Mishra? As pointed out earlier, Chakrapani worked under the patronage of Maharana



Pratap. He wrote three treatises: They are, Rajyabhishek Paddhati, dealing with administration, Muhurtamala covering astronomy, portents, etc., and Vishvavallabha describing the art of agriculture in arid, semi-arid, and hilly regions. According to Mr B M Jawalia (Maharana Pratap and his Times, published by Maharana Pratap Smarak Samiti, Motimagri, Udaipur, Rajasthan, India), Chakrapani was a Brahmin of the Mathur subcaste and belonged to Nasavare Chobe family, enjoying the ancestral title of 'Mishra'. Chakrapani was well versed in the Vedas, the 16 systems of philosophy, and also other religious treatises and several branches of science.

Recently (in 2003) a scholarly book containing Hindi translation of Chakrapani Mishra's three texts mentioned above has been authored by Dr. Shri Krishan "Jugnu" (published by Maharana Pratap Smarak Samiti, Udaipur, Rajasthan). The book indeed is a fine contribution to Sanskrit literature. However, its utility to agricultural scientists seems to be limited.

In this bulletin the manuscript (5861-22) reproduced and used was procured from the Rajasthan Prachya Vidya Pratishthan, Jodhpur, Rajasthan through the tenacious efforts of Dr S L Choudhary, Advisor to AAHF and Founder Secretary of The Rajasthan Chapter of AAHF.

The text has been translated and commented upon by Professor (Dr) Nalini Sadhale, Hyderabad, once again without charging any fee. The AAHF is highly grateful to both Dr Choudhary and Professor Sadhale.

Two commentaries have been written; one by Professor Sadhale and the other by Dr Y L Nene. Both the commentaries hopefully would stimulate scholars and researchers to provide additional notes on the literary and scientific value of Vishvavallabha. I believe there is a great opportunity for Indian agricultural scientists to relate heritage to the present-day agriculture.

The handwritten text obtained from Jodhpur as well as a typed version of the same have been printed for ease of reading. An index of plant names has been prepared by Dr Y L Nene.

We hope this publication will prove useful to all those interested in agriculture, not only in India but elsewhere in the world.

**Y L Nene**  
Chairman  
Asian Agri-History Foundation



श्रीमिश्रचक्रपाणिविरचितः

# विश्ववल्लभः।

(Dear to the World: The Science of Plant Life)

by  
Shri Mishra Chakrapani

॥ विश्ववल्लभ ॥ पत्र ॥ ११ ॥



## ॥ विश्ववल्लभ ॥

॥ श्रीगणेशाय नमः ॥ अथ वैश्वं हि सरोजमुत्पन्नं तद्वागुरैरपि तया कथयामि साध्वन् । अने जलसायतदाश्रयत्वाविधिं दुर्माणा मपि रोपणाद्यं १ यावत्ता  
नं जलवैधारीतलगतसामयंत्यैश्च चिह्ने र्थवद्भूतादिनिस्तुनरपि च शिराग्निदिशतो निघाति पाषाणसुतरं पत्तधुरमधुमधुरशर्करावाप्यधःस्था  
तत्सर्वं संवृद्धं सकलजनहितं वीक्ष्य शस्त्राणि शश्वत् २ साधारणाननूपांश्च जंगलात्सर्वतान्वितात् देशनिमित्तजान्तावावदेत्सर्वं विचक्षणः  
३ आदूषितकंदेष्योक्तमिति निर्जीरनवेज्जंगले दूरे स्थाप्य मरुत्पलेऽश्मनिकरे देशे सशैले पुनः एतच्छ्रेतमस्ति पद्यपितथाप्यारव्यामि नूपाग्रहस्ता  
कृशास्त्रादितमार्गमात्रविशदं साधारणपर्वतः ४ दिग्बिंदुस्थाः शिराश्चाष्टौ श्रेष्टात्पानवनी शिरा अथ स्थितोद्गमात्तुसाऽनया नुवहास्मता ५ पर्व  
तादृक्षमूलाद्वा शिराधो याति निर्दरे सर्वाः शिराः क्वचित्तिद्वा दृश्यंते कंदरा सुच ६ स्वस्थानेति कठिता मृत्पाषाणसंतिता पर्पटाश्मातिधातुत्पासद  
धः स्यात्तुल्यवृद्ध ७ अथ जंगले योगः जलाद्यैर्विवर्जितेन वतिवेतसोऽपुर्णदाकारत्रयमिति स्तौवत्तलदिग्गताधः शिरा तदामुनिकरैर्मिताकरमुनेतयो  
सार्धकैश्चिलीकनकसंतिना जटुपर्मरत्नोपगः वारुण्यविकरेण सार्धपुरुषद्वंद्वे शिराश्चामला यत्रोदुवरिकानवेन्नरमितिऽधःस्थामेता शर्करा पूर्वस्थां  
विकरेन वेज्जला शिराऽधः स्थाश्रिते पुद्गले लोहात्तावत्स्थेयपांडुराचमदनुत्पापुंक्षिते रक्षुर ८ अत्र योगद्वयं बल्मीकोर्द्धनसोमयोगदिनवेदस्तत्रये  
चाजुताद्वारुणपुरुषे स्त्रितिः परिमितसार्धैर्जलेति श्रितं श्वेताजार्द्धनरसुधुशरुचिर्गोधाततः शर्करा पीताचातुसिता जलस्य निकटे तत्रांते सत्त्वादुच  
१० जंबूद्वंसमीपगाच्च मधुरबल्मीकतोदक्षणे नीरं स्यात्पुरुषद्वयेऽर्धपुरुषे पाशवतामादृषत् बल्मीकाद्वरीजले शदिशि वैतौ पंतदापश्चिमे वत्सं पु  
रुषे स्त्रिभिः करमुज्जोधाविति प्रत्यय ११ अत्र योगद्वयं बल्मीके यदि तिस्रवारविरपस्तद्वृत्तिरे पुमिति ते ये सार्धं नरद्वयेऽथ कपिला मृद्वर्करा कृकमा  
त् कोतश्चेन्निलितः पलाशतरुणा हस्तत्रये पश्चिमे स्यात्सार्धत्रिनरेऽप्यः क्षिति तले श्वेता रुणशर्करा १२ अत्र योगद्वयं बिल्मीदुवरिके मदावमिति

हस्तत्रयेदक्षिणीरंस्यामुत्तमत्रयेऽर्द्धपुरुषेनीचैलदादुरं काकोदुविकायदात्तिनिकटेवल्नीकत पश्चिमे तोपुंजितयेततोऽर्द्धपुरुषेगौराहस्यत्त  
 या १२ अत्रयोगद्वयं प्राकृपिततरोऽशिरात्पुनरुलदाहस्तत्रयेऽधोमतात्तारालोहसमाचमृत्वयशिराशोणितरैतकिता वल्नीक कलिदत्ततोयमदि  
 शिरात्पश्चिमेपुंमितेत्तस्यात्तयदातदाईतहितैः पुनश्चतुर्भिः शिरा १५ अत्रयोगद्वयं मन्त्राऽहेश्चकरंजदत्तएणतंहस्तद्वयेनदिशिस्थात्सार्द्धपुरुषत्र  
 येऽर्द्धपुरुषेकूर्नेततोदेशिः कौवेयंमधुकातदक्षिसलिलचेदुत्तरेपश्चिमेसर्पलवपुमर्द्धकेचधराणीधूमातः प्रसरः १५ अत्रयोगद्वयं वल्नीकश्च क  
 पित्यकात्पमदि शिरादुर्दुतोयतरो ग्राह्योसप्तकरोऽप्यवौत्तरगतं पुंनिश्चतुर्भिर्जलं सर्प-कर्तुरकोनवेचपुरुषे मृत्तान्द्रुस्माततः पाषाणः पुटकः शिराद्व  
 यमद्योन्नात्तोऽन्तर्जालेनाश्रयः १६ वल्नीकोत्तरतोयदात्तिलकलंनैव दूवीः कुशाः सिन्धाः पंचकरैर्निताव्यशिराततश्चिमेपूर्वगा वल्नीकोपदिशिके  
 रविद्वीवातालवृत्तालदायश्चात्पुटकारतोऽलंमधुरं पुंनिश्चतुर्भिर्मितं १७ अत्रयोगद्वयं वामेष्टमेतकतोऽनवेचवद्वीवल्नीकिवायदाप्राच्यापट्करतो  
 जलविपुरुषे तार्द्धेचिद्वानिचेत् कूर्मं स्यात्तयमेततश्चपुरुषेपात्राणकीधूसरोयान्वावाद्यशिरापरोत्तरगततात्साऽअधःसाक्षया १८ हारिप्रक्षाम  
 नाशेकलिति-लमसद्योतसहस्तत्रयेप्राकृतोयस्यासंवेपुंभिः मिततमभुजगः पुंमितेपीतमृत्ता नूभिः कृष्णाततोवैवराणादिशि शिराततुरोदक्षिणा  
 मोदधोवाजलस्यातनहृणलजिजातवतोपेतनीये १९ अत्रयोगद्वयं प्राणिदतीतदंतोत्तृदसितदलीलत्तणमालिकावातत्यामेतोपमस्तिवितर  
 परिमितेभिः पत्रैस्वरुते नष्टैकायवशाखाभवतिदत्तदधस्तत्राणंजलंवास्थिताववात्तयास्यासुविकरविरपालं वशाखाश्चपत्र २० अत्रयोगद्वयं  
 नूभिर्गौराहजनपतिचरलैः राहतापुत्रयात्सात्स्वद्वीवः कर्णवीर्यं चितरपरिमितेपश्चिमेतवतोय पुष्पैः रश्मैः पलाशोभवतिमदितदाकर्णिकारो य  
 कोत सव्येहस्तद्वयेततुरवरातिवप्रकादिनद्वेविवधीन् २१ अत्रयोगद्वयं सोमोधूनीयदिसात्पुसुषमितितलवारीप्रवाहो नूमेनीचैत्वयस्य

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सत्त्वैः सर्वैर्दुस्सितीयो हि न वदन्ति तैः पंचविशैर्निरात् १० अत्रयोगद्वये मासाः कथावस्तुविद्ययापंचविशैर्निरैः सा त्रयोऽहस्तान्त्रिषु रुषम  
 धीत्येकापादुरा वा पुमस्यमानवतिचमहानिवतो वा प्रजापती यं स्यात्सुदुघनदलात्सुखरात्तद्विद्वाः ११ अत्रयोगद्वयं गुलौषधः सुहरितदलापत्र  
 वातीपात्राणि पाकानां सुस्वादिभिर्नरमितं तत्र सत्त्वोऽथ देवः एव किमरुचुविमया प्रोक्तमत्यच्च तोकादत्ययं यादपि सुचतुरैरुहजीयं च शश्वत् १२ इति स  
 रुदेशविज्ञागः देशोऽनूपे हरितजलजाऽश्वीषधीगुल्मवत्कोष्मिः सार्द्धं शकसहिता वीरणवोलपावा त्रयोऽत्र प्रचुरमधुरं पुंनिमित्तं थः त्विपं स्यान्निम्नाधू  
 कीचकरपरिमितं तत्र कोतोऽप्यदिष्टं ३ दंतीरुदंती नरतामिवावा स्यात्पुर्णगीगरुडाश्रवेण ज्योतिष्मती व्याघ्रपदी वराही यत्रास्मिता वा तु समीपवर्ती २  
 नाषच्छदं प्रककोकिलासः सलक्षणा लिदलैः कुलीया ब्राह्मी च पिडारकशरिवास्मिन्नलतणं यत्र जलं समीपे ३ स्निग्धद्रुमाणं निकरे लता सा पाश्चिमे जलं  
 भूरिचतुः करे स्यात् शोणोच्च निम्ना हरिततृणाभूः सत्त्वैः सैकता वा दवती जलाद्या ४ आनूपदेश समीपवर्ति सुनिश्चित भूरिजलं च यस्मात् अतो हि चिह्नानि च  
 भूरिका नि किं विस्त्रिभिवत्समुपेक्ष्यतीति ५ इति आनूपदेश विज्ञागः देशो माधरणो तोयं सर्वत्र परिकीर्तितं अर्द्धदशकान्तं विहैरंति च भूरितत् १ पा  
 पार्वतीमिषु देशेषु त्रयं संभवति ध्रुवे आत्मानं देशनांतं च वदेत्सर्वं विचक्षणः २ सारस्वती ताविशदा किंपतोऽप्यत्र यो गान्तिरिव ता विदार्थ उक्ता वराहेण च  
 ये च वा तैर्देशेषु वेह खलु पार्वतीये १ कोपिद्रुकोदुंवरिका पलाशस्योद्योगश्च मिथो परि स्यात् पुंनिस्त्रिभिरुजलं च ते वा मधुना लं जंगलं कैच भूरि ३ स्निग्धा  
 श्वनिः क्षिप्रदला यदा मुरनो कस्तुगुल्मलता मदुःखा चित्रसता पक्षिणा वसंति तत्रां वुमिष्टं निकटेऽपि दिष्टं ३ खर्जुरं वृक्षतपत्रितीयाः ससिंदु वारा वरतत्  
 माता ओदुवरी मैव च काक पूवी विनीतकस्तत्र जले विपुंति ६ पुष्पप्रधाना सारवेलता वा जात्या दयः कुल्लुक चंपकाद्या स्यादृष्टिमीनिव कबीजपूरा फलादि  
 तास्तत्र जलं निरुक्तं ५ तालद्रुमो यत्र च नालिकेरी सको च नारस्त्यथ वेतसी वा अग्रेऽपि वा पर्वतसूक्ष्मदृष्टः स्निग्धश्च तत्रास्मिन्नत्र प्रभूत ६ उक्ताः पुंनानिर्भरं सत्

५ मादेशनदेस्तावत्पर्वतीये पाषाणसंधेर्दुममूलतोवासिद्धोवनिर्णीतनत्रमान अनूपदेशेत्वथपर्वतीयेशिरोक्षिन्नरिजलाचदृष्टा तीर्थम्देशेपि  
 चदेवतायेचूनेरधस्तात्क्षिचिर्दूर्ध्वगामी ८ प्राशुमुत्कीर्णवरः राजनाभावेर्ध्वकावत्घुमिमीति काष्ठा पलायधूमाकपिलाशिलायातस्याः समीपेवकुतो  
 नमस्ति ९ कौशियमावहीकघृतोपमापापारावर्तेदुप्रतिजाशिलाया तत्रास्ति तोयं सारामेति श्रीशिलायवायाजगताम्वितासात् १० सप्तर्करीतस्य  
 दैपमुक्तकृष्णचमृद्यन्तशर्करावा गोधूमनामस्तिकतावपवपीतायवाम्भुशुंभुतत्र ११ ताम्राब्जनासर्करयाक्षितापाकषापमल्लंमलिलंचयत्र त्वापुंपुरा  
 मालवरोनतल्य १२ गुल्फवृत्त्य कृशरुत्तमस्तसखिन्नपत्रादचतत्रनीर श्रीपार्थिसर्गोर्जुनशकवित्वाः सशिंशिपाः पार्थववाश्चयत्र १३ दूर्वांनंबूकुशमि  
 चमहानिवपीतूपवासाश्रद्धाणांमितिरेहजलेयोगतेजोगदेषा पादोनासातवतिसगिरोज्जगलानूपकेर्ध्वानूपेसामुनिनिर्दिताहसमातेनदेशे १४  
 अहोदेशश्चतुरमुक्तैरत्वमध्याधिकोवानिनीरोपेतदुचमिति कल्यार्तापातयेव उक्तचिह्नंनवतिरिपथातस्तत्रैववाच्यं दूर्वांनंबूकुशमिति निर्दिताहसमातेनदेशे १५  
 शिष्ट १५ अस्तिमुर्दर्गलंवाग्निरुद्धादितमृषेर्मया जगद्वर्तनत्तलस प्रथम पूर्णोत्तगतः १६ इति श्रीमिश्रचक्रपाणिद्विरचिते विश्ववत्सले उद्दर्गलनि  
 रूपाणि १५ अस्तस ॥ १॥ - ॥ सातेजलेतत्रजलाशयानिका र्वाणिनाकृतिमानवति आमेष्ठतानीतिपद्यावकाशस्यावेचमानंचववर्हिर्पथोक्तं अतडाग  
 वापावमिदूपकुडैरुदेवरातेकथितेमुनीये विनाशमालेनवदूषिताः स्यात्कृत्वालवालादिपथेक्षमासात् २ इतचतु कोणमथत्रिकोणमनेककोणत्वथदं  
 अनेव तथाईचंद्रमधस्तर सात्त्रैपंप्रमाणंखनितस्यतल ३ मरुतरौचमथार्धचंद्रंनचतु कोणमथोमुनदं नामाति केक्षितारसावर्तेतिबुद्धंनैर्ध्वारह  
 सप्रथ ४ प्राकारोदक्षिप्रमानजेदकवमुत्तरचताविर्तेदः परस्परंनववर्तनाकुडैः समंलक्षणशंकर सात् ५ श्रेष्ठसरोरेडसहस्रकेनमध्यंतर्द्वंनतद  
 र्भकेत कनिष्ठंतातिपद्यावकाशंमाताधिकात्पानिर्भवतिमश्नुत् ६ गिरिद्वयोरतरवक्षपालिर्नीणगिरिरग्रविशालपूर्वा अत्यव्ययेनेवमहासडागमेव



तदासततभूरितोप ७ अथेपदान्ः पृथुतासमंतादुच्चजलस्यागमनेवुत्पात् अत्वाभुनोनिर्ममन्श्चतत्रपालाकतायाहिमहस्तरः स्यात् ८ आपालिशीर्षध  
 रलीतलाच्चतोपातपक्ति विदधीतधीमात् पालेअदार्थीर्यमिहप्रलेप कार्षीयवास्ततराः सुधायाः ९ निम्बाधरित्रीपरितोबुध्मर्णनवेत्सत सिद्धतउगएव मा  
 नेन वातात्मयमानहीनस्त्वचवेसतकगर्त्तकाद्य १० तजगमद्योतयन्मपतीनांनवंतिकेलीनिलपानितोरे नेलावकार्यजलकेलिसिद्धेमाथ्ये अतेषावतमेतुनी  
 वा ११ नेदामिकूटैकमुखीचवापीनडाचषट्कूरपुतादिवक्ता जयात्रिवक्तामवकूटिकास्यैश्चतुर्भिःकाविजपार्ककूट १२ विशालतोपानपुतायनालिकार्पो  
 मयाक्षीद्विशालवत्स्याः साक्षीयवाकूरपुतापिम धेसमंततलोएकैतनाद्या १३ क्षिप्तुविजयः प्रातोदुदुमिश्चमनोहू रूपाश्चामणिनयेधजपोनदोषशंकर  
 १४ अस्मपावच्चतुर्भुजतेवासैकमादैककसाभिहृष्टा भवतिगतोनिचकूपिकाश्चकुल्यालवालादिविनेदमाम् १५ रूपसनीचैर्पदिवालुकास्यात्सारकुकाहैः  
 कगरदिक्षिश्च स्वाप्तामवीहपुवादिनिर्वायमानरुध्म्येतशिवाजलस्य १६ यामस्यकूपोपरिमुख्यनूतेजनाशय तेनकार्य विदिग्नतोदाहकर कमेणवात्तावला  
 नाशकरः सनीदः १७ शिगयदनाक्तिदिशामुपनूपाविदिकृत्वोपिनदोषकारी आमाघदादंडमहत्त्रैकैवारदादिसैकामनदोषरोमी १८ नडंतुनडंपरिधंचनदं  
 कुंडचतुर्कीचतुरालमाद्य नैर्दितीपंततीप्रममिद मध्येचतुर्थप्रतिनम बुद्ध्यात् १९ कराष्टतोहस्तशतानिनातिचतुस्रामितु चतुर्दिशामु मध्येगवाहै सहिता  
 निकोरीशालाचतुष्पादियुतातिकुपु २० अग्राधगांधंस्वतएवसिद्धतदेवस्वातंत्र्यविविधाकृति स्यात् यथासिततत्स्यतथैवकांक्षीशालासुधान्तिश्चनिबंधनवै २१ शि  
 लामदापातिचवापिकादौनिवत्समात्रेकठिलादुर्वी तस्या परिचार्यनुमिप्रदिष्टान्वणेनिदानीकचपामितश्च २२ ताम्रान्वितानामृतिनाविक्त्रिाविंशतितामो  
 किकहेमवर्णी मज्जोपमोवृसनखानुरूपवाचंजातमात्राभितिलोर्कवर्णी २३ नम्राजनाचासुदिकोवलाः क्वानीतद्युति पांडुराशिःलाया वर्णिविक्त्राहरितालना  
 वायासातनापातिननेदताशु २४ शिलाप्रनेदामचंद्रकुकांनवस्तेत्युपावाविशरासुभूरै यैरोषधैस्तोमहप्रदनेनक्रंनकुंठनवतिप्रहारे २५ मज्जामकाहैः त

[illegible]

ऐपले तत्र समश्च कर्मको लोकोपहितामच ६ सप्रसारावा मुदुलायवाया प्रतज्जावूनदनाधरित्री तस्यामयतिनचगुटपुष्पुंतागराजादतचंपकाश्चसुः ७  
 आनृपजाः स्युर्मुचकुटजाती श्रीखडिकोकेतकिंकेतकावु रभाश्चमारेलकुचोपिजेदूमध्यादिवातेपुमवल्लिगुस्ताः ८ रोप्याश्चपकपासलाप्रवकुलाशोका  
 आसाधारणिको लोदुवरि निवपिपलवराग्रामाः सचिंचाशनाः असाक्षीरमभूकाशिशुकमहातिवाजुताद्यापुमादादिमादिकलप्रधानविरपाः पुष्पप्रधा  
 नालताः ९ धवरादिस्पलाशावंधात्रीगुटीकाः शिवतिकरनशाकाशालकीसमपणैः सुरतसरजनीकाकिदुकीजातिकाद्यावततिविरपत्ताजंगलेये  
 प्रशलाः १० अंकाः किपेतीपिमयात्रवृत्ताल्लासथानेचतुरैश्चपुंतिः सितिह्वलनवादिरेणवक्षिप्रयांतिनेपुष्पफलातिदधुः ११ देवप्रजावाहतितांन  
 पाणमतीवपलादहितप्रदेशे वृद्धिसमायांतितापुमाद्याभवतिनेपुष्पफलादिमुक्ताः १२ बीजोद्भवाः कांडमवाश्चानेकंदोद्भवाश्चलतापुमाद्याः ३  
 क्तामथानेपिद्वीजकांडनवाविनेदकशपामिनेषा १३ चिंचाप्रचपकमभूकपित्यजंदुपुंतागविल्ववकुलाशनकांचनारा सहीरिकासुपनसासकतालि  
 केरीतालादिकाः मलिकारखलुबीजजाःसुः १४ जवीरतिवुकसराफलबीजप्ररवारिगतेवकारमईकचपकाद्याः कर्णविदामकमलाखकपाडुरागाः प्रामा  
 तिमृक्तसुखाईहवीजजा सु १५ जातीगुलाजतरुणीतवमलिकाश्चमलीजानतरलकुंदाशिरवंडिकुब्जाः तावूलिकासलिकेतकिंकेतकाद्याः कीडोद्भ  
 वाहमपाकक्षिताः कियंत १६ विदामुहीवेदकसिदुवारश्रीरवडिकाश्चमवराः पलाशाः सदाडिमत्तमुनिद्रवशाचादिकाः कांडजवीजजाःसुः १७ कं  
 दैश्चवा कुंकुमशृंगवैरिदिराकासूरगपीतिकाद्याः पलाजुजातीतिचवीजकंदसमुद्भवातीतिवदंतिधीराः १८ रमादिकाः मंतिचकंदकांडनातामथात्पेपि  
 समूहनीमाः अरामवोपाश्चतुरैश्चपुंतिईयाचपृष्ठावनपालितोवै १९ गृहेतिचिंचाविरपाः आमन्ताः अपिनातहं विहिताः अपदिशिवाविशेषात्तथापि  
 मितान् २० गृहसर्वाद्यामथवीजपूरजवूरिडावदरीपलाशाः क्लेषातचिंचाज्वनकांचनारकरंजकाः स्युर्नेमृभाश्चसाचाः २१ वक्षीगृहेतकिरुटेपिदु

चौदाविंशतः करकितः सदुःखाः कलैर्विहीनाः खलुहंतनीयाः आसौक्यं च अपि सुखार्थिपुंजिः २२ फलमस्तैरहिताश्च सर्वव्यासां कोलविनीतका  
 द्याः एरंडः सैद्यार्थकनीलिकापिनवापनीयश्चकारिकाया २३ पुष्पप्रधाताः ससकलाश्च वाय्वाश्च फलप्रधानाः प्रथिताश्च सार्काः जतापुष्पवल्गो  
 षधयः सगुल्मावाप्यास्तथात्वे गृहकारिकामु २४ अजः शयावलेपाश्चान्नपोदुर्वरिकागृहान् वातलपिपलः फलः सौम्यास्तनविर्वर्जयेत् २५ गृहंति  
 सिन्ध्यादिवात - दक्षिणाग्राहिवीयादि कारिकासात् तत्रोपलोपनिपमोश्च दूरे रोप्यानिषिद्धा अपितत्र सर्व २६ आग्नेयपाम्न्यैकत्पनिषिद्धवा  
 टिकापुरात् सर्वमश्विनसौमिषु कुतामशोशमारुते २७ दुर्गमप्यामानप्यावकाशं कुर्याच्च सधारणवाटिकाच सर्वे दुमास्तत्र रोपणीयाः स्यान्ववसाश्च  
 पिनातिदीव २८ तत्रावपकमालतीकुरवकानिर्मलिकापूष्पिकाश्चिखंडीकणवीरकुंदवकुलाकातिकासैवती कर्लीकुञ्जगुलाहमसमनासिंदूरिका  
 केतकीबधूलोतचकुंदकेतकिजयानि मालीमुञ्जिमुञ्ज २९ इतिपुष्पप्रधाताः मालरोदरीरसालकरकाश्च उज्ज्वलाश्चिक्वा मर्दकिंतिपुष्पाकि  
 रसात्तत्रावसावकाः खड्गुरीपतश कपित्थकराषप्याश्च सांजीरकावंशोदुर्वरिशालतालजटिलारोहीतकः पारला ३० राजादनाशोककंदंबजंबूजनी  
 रतागमदापलाद्या वीजाद्युराजपलकदाहिनीकुंजो मतालिकेरी कमलारवकाला ३१ आषाढपिलौलकुचोविदामा आलेखलखतनेरंगार्थ तावूत  
 कैलाशमप्रसिद्धी अजोपिरोप्यास्तत्र सगुल्मलताविता पुष्पफलोपजीया ३२ करमर्दकवंशदीन्यां चैरोपयेद्बुधः फलापरावताभ्यां कपिन्याश्च प  
 श्विने ३३ सौम्यलोकादिकानात्पदपथावर्गतिगोपयेत् वायामुक्तातरेतद्वृक्षेष्टभाधमास्तमूत ३४ अपरितापुविहितस्य निरूपकः उल्लासस्तनीय  
 पूर्णानतोपविष्टवल्गने ३५ इति श्रीनिश्चक्रपाणिद्विजने विश्ववल्गने ततीयोऽन्तासः ॥ ३॥ ॥ ११५ पोदकालोऽखिलबीजवापेष्टत्वादिसंरोपणकेशशक त  
 त्रंबुदेवधितोपनीयाश्चरुस्तौ भवती ह मध्यमो हि माग सोऽथी कउ नौ निषिद्धो वापेष्टः कथितश्च कथित् सर्वमिकातावेहितास्तदातीपदातिपत्तो

कर्मिष्वेतेषां २ मृद्वीवसाधारणप्रशस्तामवीहिपातोपगवीजवपि अथो-विशिष्टदुहितवपाद्वर्णदिनेदेतवमानिता ३ उद्वरीतिद्वकवीर  
 विद्यावराधराजादनचंपकाद्याः सर्वशजं वृषिचवौधरायाः सप्रसरोपामपिसचवति ४ ग्राम्याअरपाअपियेदुमासुशुल्लदिवात्योऽश्मविमिश्रभूभो न  
 सुत्तितावचक्रमिश्रितापांरनादनाद्यावकुलः सचपा खेतान्ः काणधट्टिकारिमुताधप्रशस्तानचधातुपुका ५ अज्ञातशाखावितपा-प्रशस्ता संज्ञातशा  
 खा खलुमधमा-सु. उक्तिलपुष्पाअधमा फलाद्यानरोपणीपानेनयंतिमस्मात् ६ श्रीमिसपत्रातिकरेऽञ्जकाले संज्ञातशाखा खलुरोपणीयाः ववीसुसुक्तं  
 धमुतावसंतेरोपावृत्तेरोपादुमाअत्यमतेधमांते ७ निहंतिनसुतिः पत्रहरिताभवनतिलचयत् रुष्टववृद्धासेवंतद्योपवारिकविधौ ८ उद्वहिकदि  
 कीरानः परिशकानवेतदा वापयेदजगंधावाशतपुष्पाहितादता ९ गर्तकवाचवापूर्वप्रत्यापूरयेत्तदा करीषिणचवीजातिनावितात्पाअपनादिकेः ९ वापये  
 तानिमयास्यातगोमयेमृदितानिच विलिप्यतिलवीजदुसस्ताज्येताथवामुधीः १० बीजमकोतौलाकंजीर्णमप्यातुरोहति भवतिद्विदलासद्देकाहेतचसर्व  
 पा ११ गर्तेविधामसिकतामयवासुपत्विभूमसबकलेमपीद्वचनालिकेरं सामात्यरोहतिमरुतिलवणंनुयोगञ्चुषोदके प्रतिदिनं चतथेवसित १२ अकोल  
 तेनशकतापमसाचुतचगर्तेवपैत्तुसिकतापरिपूरितेयो आबोरपूगत्तराजफलसुसिकंरुकीरिरारि कवदामकनालिकेर १३ तृणैःपलाशपत्रैर्वीतावदा  
 द्वाद्वेदुधः बीजधात्रीधरोमावदंकरा संभवतिहि १४ ममूलमृत्तिकाशुक्तानंदिपाअसमुद्धरेत् विरंगशृतमीदीकृत्तिकादूर्गनिवेशयेत् १५ गोमयालिमशा  
 स्त्रांस्त्रिं धान्योपयेत्तुधीः प्रतिमकरं विणगर्तेसिक्तेनसावत् १६ दुमाधोउशविशर्ककरैरंतरिताः रुमात् मधोनमाधमाउमासंश्रयाजीर्णमतत्विद १७  
 तपाशुभलताद्याश्चतुस्तद्विक्रानंरो रोपणीयापध्याप्यावदीपीत्वसिक्रमउले १८ दहदुर्मविशतिनि वरै करैर्वीमश्रातथाजोडशानिश्चरोपाः अत्याज्यद्यो  
 र्केअकृतातरामा कैश्चिदावस्थाप्यरुतामपैषा १९ कर्णीवदामलकुचाभनकवीजपूराः सदाउमा पचमृनिपत्तिकरैश्चरोपा चपादिकामुनिदार्ककरैश्चचारसा

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तितित्तसमूहेतपोपरिहादिकिरिचञ्चल यष्टात्रसंख्यपटैरौवीर्वैरान्तकालकमार्जनेस्वात् ७ कुप्रायवाकंरकिरोपलेतरत्ताद्रुमांनपरिरंविधानात्  
 कार्कीन्यवाचनुरैष्यपुत्रिष्ठयथाकालमपौखिलायै ८ समाप्तमष्टउत्तामररत्तातिरूपकः विदग्धहृदपात्रादियंयेस्मिन्विश्ववत्तने ९ इतिश्रीमिश्र  
 चक्रपाणिदिरचितेविश्ववत्तनेषष्टउत्तासः ॥ ६० ॥ ॥ विधापरत्तावुरुधातसूगकुर्मादपोमषणमोषधार्थः वक्ष्येप्रयोगान्बुधानुभूतास्तेन्यत्रमांसेर्वहकोनि  
 रूताः १ अथकुण्डले ॥ ॥ मैषाजसांगजवादिकानामेदोवस त्वग्रुधिरसमञ्जो तोमेनवहोविपवेचममरूपकैस्तिपेरक्षीरमनुशनीरं खलितिलाताम  
 धुनवत्रांउद्यतंसमुत्तार्यचक्रोददेशे निधायत्तांउत्तलुपत्तमेकंतीर्पहितस्याकुण्डलेदृष्टे ३ दुग्धोदकंतिदुकपादयानांमिपाल नत्तापिचनानिकेष्पीः ५ आत्रां  
 दिकानांहितंउदशले ६ खड्गविल्वलकुचाशननानिकेश साक्षोरकाः सतिलसर्पचूर्णदिनात् दृष्टिपंतिपनशत्रुमधूकचपात्रीह्यांनुनासखलितचविना  
 मःपुर्ण ५ सर्वद्रुमाणाकुण्डलेमोहितोकिमश्चकलपुष्पदृष्टे विशेषतोदाडिमपादपा नांभूवोमिहिस्यूलकलाशुकारी ६ मत्स्याज्विकलालिप्रवि  
 फलाजिनधूपित राडितोमकफलपुष्कलतस्पर्हहवेत् ७ कुतस्यचूर्णकथितवुत्तेकोदृष्टिकरोदाडिमपादपाता कार्फीसर्वजकथितांबुसेकामत्सैरनेवी  
 सहनश्चरानात् ८ श्विन्नाश्वमाषांमजलानिरुक्तादृष्टेजः ९ लाताजराभमलकाः दुग्धस्यसेकातकलद्रुमाणाफलसुमिष्टंनवतीतिपकं ९ मूलेपुरीषेखलुकु  
 कुरानांदतेनिमित्तालनतौपमिका अतीवपुष्पानिफलानिधत्ते श्लासुदृष्टिः १० जनीदृष्टी ११ विपंगुसिद्धिर्धववाहरिवाविउंगुजातिलनिवहृत्ता घृता  
 श्वकर्णविलोडिता सुदृष्टिकताश्वपककेशराणां १२ कंधचपालालमथोतिधामवकांशुकोमधुराणिनूर फलानिधत्तेपनश्रोतिशीघ्रमीशर्जितेवृद्धिं  
 जनीहृत्तश्चत् १३ क्रोशतकीर्तिशोफाश्रयाणांकाचेनरुह्यासहितेनशितः धत्तेमधूकः कुसुमानिभूरिमधूपितोपेवविचित्रयोग १४ यस्याश्रयासु सुनिपम  
 वदा स्थलेनरात्राकिलकोद्रवस्य सौम्योपिधत्तेकुसुमानिभूरिमधूकहृत्तो जनेचवृद्धिं १५ मधूकचूर्णविनिधामूलेहीराज्यमाहीकविमिश्रितं च भूवोपिफो



कौहिकपितृविवेचिनिष्ठास्यनस्थीतिफलानिधतः २१ अजैडकानूकरविद्विः जंगकृतोपचारेणचबीजपूरः नूयोश्चमूलाविलविरिक्तः फलानिधतेसुवृत्ति  
 सन्वत् २२ नाहीकयहीनिलमिथनीरसंतेवितास्याद्धरीफलानिध्या कार्पासिकामनिविपकृतोपतितासुपुष्पाखलुपारलासात् २३ तिलोदकेनवातेन  
 मत्स्यमांसोपचारतः शोफालीपीतिकासितापुष्पितैकदिनाजवेत् २४ माषमांसगुडदीरकायमेककुरुदंतिहि नारंगविरपेस्पूलमुरसाविकलानिच २५ क  
 केधुमेधीतिलतक्रोधदध्मारनालावुनिषेचनाई विपंगुंतागकदंवदत्ताभुगंधिपुष्पाभुक्ततेदशाहत् २५ जंघाग्राशोकधानीककमलखलुकुचोलेखपि।  
 चाचनश्चत्जंवालदीररोश्रीःसमधुधतिलेहूलदेशेचविस्वापश्चात्समेधेनान्दशदिवसमद्योत्तौदुग्धावुजिर्वैतिघापीमूषमुत्पन्नवतिखलुकुचं धत्तामाग  
 तातं २६ सतितगुडविडंगमंनिधायाथमूलेमधुकुसुमचूर्णपूरयित्वासुमर्दिः बभुकुसुमयिकाशीकीलमूलांबुसेकाभवनिलकुचरुहौसौरमाद्योदशाहत्  
 चतेत्तचूतदृक्स्पष्टश्चलेखनहितं मंजरीणाविकाशामुतिनि परिकीर्तित २७ कदलीतोहितंनस्तर्पिहोगोमपसंनवं शलेलुषांबुक्कपितेकगूणाविशेषतः  
 २८ घृतासारकमल्लितःसिक्तोकोलानसापुनः अशोककुसुमाद्यःसात्पपाकांतापदाहत् २९ काष्ठामुखसवासितोवकुल पुष्पितोभवत् तिलकश्चतदाशे  
 षादशोक्तसत्ताहत् ३० खिलमाषाज्ववलीकुमधुनिमाचपमिनी पंकोजवाप्रतिदिनेकुलानेऽपुताभवत् ३१ मुंगंधजलमसिक्ताविदाधेकुलपात्र  
 तो आसन्वमेधेमुरजिदलास्याकेतकीपशं ३२ निखिलाकुलताःसुरोपिताःसुरभीघृतधूपिताःपुनः धनगृष्टिवासांबुनिर्दिशामुन्मत्ताश्चफलतिसिचिता ३३ न  
 मंकुनमुरंवरुर्द्धिदधन्नाम्रातकःसुखी दाडिमामुमतेबाधेफलापमुनवोविदुः ३४ निलारफूलयदुग्धविडंगमिश्रेलेपवीजमिलिभैर्हिजले मुसेक मूला  
 लवालइह मृत्तुकरिषदानंभूषोपिदोषविगमापनवेद्यद्वये ३५ सिद्धार्थकदलीदलातिशफरीविट्कोलमर्जारपोरेतेषांममनागमाज्यमहिनचूर्णनयो  
 हित दन्तधूपविलेपनोपचरोरुपायनरागद्वह्वाकापलववकलेखमधुरबालोलपुष्पद ३६ अपुष्पलोकसारंगधरस विडंगमाहीकनिलैःप्रलेघ्यत

धूयोयत्स्यापि नृदलवालेसेकोपवक्षीरजलेतत्तं वृद्धिः कारः सा कुणौ शिशुना ३८ अन्तर्वातरिकमतिक्रान्ति-समिदुवारेः सिलमाषपुनैः यवाज्यमादीक  
 यमोविमिश्रैर्धूपानिलेप सजलेष्वनक ३९ सुधीयतचौप्रविडगुरुहेर्लपोऽप्यधूपानितुषेः रुमिधैः सेकोजलेः सा कुणपां बुनिर्वीविशेषतः क्षीरततोर्हिनाय ४० आ  
 र्थ्यमाणत्तरवः सुमृक्षितेजसूत्रैरभिसिच्यमाना सुधूपितास्तनजलेर्निषिताः कुर्वन्ति वृद्धिं नितरां विरोगा ४१ किञ्चिन्मयोर्वसाकोलकापेन परिष्विताः  
 एतमादीकसिक्तेन स्फीता सुनैस्तजोदुमा ४२ सिद्धार्थफलसंपुक्ताः सेविता गदवर्जिता जायन्ते तत्रोन्मत्तपत्रपुष्पफलान्विताः ४३ सिन्धुमधुकुपुष्पे  
 महीकुण्डज्यमादिकैः निक्षिपेत्तुलितान्मूत्रैर्विनाः सर्वत्र ४४ इतिकृतिपमकोणपोषणार्थमतास्तेन उह्यान्मन्ये विविधजनपदानां ये हिताः पादपानां  
 ४५ उक्ताः सप्तमः सप्तोऽप्येस्मिन् विश्ववत्तने पोषणादिविधौ न व्यपूर्णातामभ्यगादयं ४६ इति श्रीमिश्रकृपाणि विरचिते विश्ववत्तने पोषणविधौ सप्तमोऽ  
 द्धानः सप्तमः ॥ ७॥ ॥ अथ तत्तद्विहितं तत्तत्तत्तद्विधौ सु कटूस्त्रालवैर्लोमरो मधुरास्तस्मिन्मन्त्रवर्तमानेन कपा ॥ ७ ॥ नृणां निवर्तनं च  
 वातपित्तकफादयः संभवन्तीति तद्धोतैव ह्येव तद्वापि नृणां २ जलौषधानां संपुष्टेऽप्येकीरादिनां च ते शीतदग्नेश्चिदग्नेश्च विद्युत्पातहर्त्रेण ३ वातमग्नेज  
 रादुहेतुं मर्द्दन्निषीडिते नीतिभ्यानां तरेवापि निवासमाणिनां नृणां ४ विधितेऽपि संस्कारेषु पचारादिषीडिते अत्यथौषधानिदाने च सुधिते दोषसंज्ञे ५ एति  
 त्तरूपां विपद् संभवति विशेषतः तस्मात्सर्वप्रपत्नेन श्लाघाविधिमुपाचरेत् ६ देशांतरेऽप्यवाः केचित्स्त्रालवैर्लोमरो मधुरास्तस्मिन्मन्त्रवर्तमानेन कपा ॥ ७ ॥ नृणां निवर्तनं च  
 नोभुवं ७ तद्भूमिदोषाः कालात्पथमविनासातोयवा सुशुक्लपारीक्षानदेवतावरतोयवा ८ अथवा नादीनां लक्ष्णां स्यात् रूक्षीः सौकु हृक्षी दीर्घा नित्रातुः स  
 लघ्वेन फलपुष्पातिनो धर्तयवाः स्यान्निचवातलः ९ विपाकसोमैर्हिमैः कटूकैः सस्निग्धमांसकृषिनां पुमिश्च सेकोहितो वाति कपादानां सुहृत्तनोऽप  
 नस्तनापि १० निर्गुटिकारश्च धपचशरूपत्रातुतेष्वेव निसेवनेन तत्तललेपेन तिलान्वितेन प्रपातिशतपवनश्च तेषां ११ आक्षदनेनैलवलिप्रदानम्

लेकुमारानजसूत्रसेक कुल्लामकल्याणपुरीषवृत्तत्वगश्वगंधाजलसेक३८: १२ वाताकोशैस्तेचगुडिकाशंयपसुर्गुमेष्ट्वै गोविदनत्यातकवसाते  
 वे कुपपतेजयेत् १३ रत्नाश्वगंधापवनारितगकणाकषापेणकृतोहिसेक सवातिकवौशतपुष्पिकायात्तेपेनवातप्रबलजयेत् १४ निर्गुडिकागुम्पु  
 लुशैफसर्पि कुवेरेनवासनवीजधूपः हितोदुमातापवनात्मकानामूलेजविष्टावलिपूरणं च १५ अथपैत्रिकलक्षण पांडुपत्रं कशःपत्रं सुवशाखः स  
 धैविकं आनपासहनीः कलफलपाकीदुमः कृतः १६ सजिधुर्गतिर्मधुरैरसेश्चप्रमातिनाशमहसाचपितं शीतावुसेकैः सुरजीपयोनिर्हृतं दुमाणात्सहि  
 ताविटे. १७ उशीरमुष्णमधुदुधसर्पिः कृपोपचार समयेक्षपितं जंगलवर्मेजालविलेपतोवाडूणांमिताहौष्ट्यताग्रधूपात् १८ अथश्लेष्मदुतलहं  
 लिथ्यद्वदस्वग्निसादानपुष्प फलेर्जतस्वादसपिच्छलेर्ध लताहतागपरिमंडलोसौचिरमवालीकफवात्तुमः स १९ तितोत्तमहै कटुनिःकषामैः कफोरमैर्नी  
 शमुपैतिशीघ्रं जलेश्चकोष्णे परिवर्चितेपिठग्वीनवेत्तैश्चलपादपौधै २० लज्जार्जतोदुवरिसप्तपर्णीनिवत्त्ववावैविहितं कषायः श्लेष्माविताताविहितस्तृष्ण  
 नपेवकासाघ्नरोहितातो २१ आग्नीमहचरारिष्टवासासदिररोहितैः कृतं काथोहितोदूणांश्लेष्मालपरिसेचने २२ मरुद्रवामतावासाव्याग्नीशरोहीषनिर्मितात्  
 कायात्स्वप्रकृतिप्रतितनः श्लेष्माजितोभुवं २३ लेपोव्याग्रैरसेनापिमधुरफलसपुत्रं घनपत्रकरोदूणांसत्राहातश्लेष्मिणाहित २४ अथजलसेकाधिक्याजीर्णल  
 क्षण अनिद्रतापादुरताप्रवालहातिश्चशराशयविशेषाण्यंत्वजलातिसेकात्सपिपीलिकात्वंदूणांनवेत्तात्सविगधताच २५ अतिव्याऽल्पत्रहारैः सुपरशुजनिर्तैस्त  
 सहस्रसूतादिस्नानविश्रायदोषात्जनितमपिरसतस्मृमाणातुनपं मश्वाज्जिष्वाविडंगैः समधुश्चतितिलैः पूरयेत्तालवालेष्टृक्षितदुग्धोपैः सिधिततुरयोपा  
 तितिर्दोषतं २६ लज्जार्जुनवर्द्धकस्मप्रदानचहितवोरत्येतेचन २७ अथात्माद्यजीर्णलक्षणं त्वत्वंनाजीर्णतोदूणापक्वनामप्रसेनवः मपिपीलिकताचपि  
 शोषः चवेधुजापते २८ विफलवाचकुवेरासीदत्वामूलेनुसेचयेत् सविउगेंगदीसौधलेष्टृक्षितसरोः २९ वैकंकरतस्यपत्रांमूलेवृष्टिप्रदानतः मध्याज्यधूपा

तेकञ्चमुच्यतेऽजीर्णलकः ३० शाखाग्रशोषणतत्पत्त्यशोषप्रजायते ३१ कर्कषुवारवैनिष्ठसुरजीदुग्ध-  
 लादितैः औषधीत्यावविरुतितेषांशमपेक्षते ३२ उद्धृतमूलोत्तरमुत्तिकाः ३३ दसपूरयेदमृदालवाले मध्याज्जुधैश्चविलिप्पगण्डं संवेपेही  
 रजलैरुत ३३ मितम्पुगुलकृताङ्गपाङ्कम्यतिवैरुजः चानपत्तवत्कृशोनाजायतेतत्पशाविनः ३४ अथकृमिदोषलक्षणं दोषैर्विनायस्यतेतः प्रवा-  
 लहतिश्चशाखाग्रविशोषणं स्यात् त्वग्नेशनमत्रविचरिताचरानिर्गन्तवकृमीश्चविधात् ३५ कृमयोद्विविधाः क्रोकावाह्याश्चमृताः अपि बाह्यास्त्वग्मा-  
 यः कश्चिन्मृगुष्णकलाश्रयाः ३६ काउमकोनामकृमिर्मूलद्रुमाकावातराश्रयः तद्दोषतत्तत्कर्मातिनाशान्तानुपाचरेत् ३७ कृमयोदुष्पुद्गोबाहुलदोषाच्चदोह-  
 दान् ३८ नवापत्रप्रतीकारवत्सैशस्यानुसारतः ३९ आरम्भधारिश्चकरंजमनपर्णत्वोजंतुरिपोश्चचूर्णैः सूत्रैर्गवापचूर्णितैः प्रलेपाः कृमीन्जयेद्विगताः स्तम्भ-  
 ३९ विडंगसिद्धार्थकदुग्धपेणगोमूत्रजलातवचायुतेन लेपेनशाखांतस्यावृकृमीन्जयेद्विगताः स्तम्भ-  
 निविषाकांजैः समर्जसिद्धार्थकसिंदुरैर्दूषः कृमीन्नुदरान्निद्रुमाणं ४१ विडंगगोमायुवराहविडिः सिद्धार्थगोमूत्रमुतः प्रलेपः कृमीन्नुमाणाहरतेतत्स्यात्  
 बाह्यान्ममीषांमृतेपिधूपः ४२ धूपयित्वा दीरजलैश्चमिक्तः प्रवालशुभवाहरितो कृमिर्दुः स्यान्निवसिद्धार्थवचाविडंगैः अर्जुनवृक्षतिलदुग्धतोषैः ४३ जमेत्  
 कृमिन्निद्रिकाकलत्कृगुग्धुतेकात्सकलद्रुमाणं लेपाच्चदुग्धाज्जुग्धुद्गुदीनां धूपार्पिश्चाऽस्थितिवंधनाच्च ४ मधोद्रुमाणपरिरोपितो विपलाशशस्त्राफलितो  
 पदास्यात् जलोत्परोजलजाश्चकीटानिवाप्यतेषपपासुशीकः ४५ अथक्षिप्रतत्त्विक्रिस्ता तेकोजलैर्दुग्धैर्विचगेमयेस्याकोविमृत् परणमालवाले विडंग-  
 मध्याज्जुग्धुतेदुग्धे प्ररोहकृच्छिन्नातरी प्रलेपः ४६ अंकोलेतेलेनविलिप्पवर्षव्यादिलिप्तः खलकूपपके द्विक्तो हिमोदुग्धजलेनमिक्तः प्ररोहमापासविरोणमन्त्र-  
 ४७ अथशीतदयचिक्षिप्ता अंकोलेदुग्धाज्जमधुप्रलेपाभूतेचक्षुःजीमयतेलदानात् शाखातिलदीर्घनिषेकलेपात्तिक्तोऽबुक्तिः शीतहन्तः प्ररोहनि ४८ विडंगकुत्सा

वमयोविनिश्चूर्णितिलांतिहितचमले श्रीताहोर्जोर्जनयेक्षणात्प्रकोलतैलाक्षितार्द्धलेप ५९ मूलेतरोममयनसदानिर्गुहिकाशोककषायसेकं शा  
 खप्ररोहजनयसुदीर्णवर्सावराहस्पचलेपसेकात् ५९ अथअग्निदग्धचिकित्सा क्षीरं वृषिकोमधुनावलिप्र कंदेतपनसपयोक्षितेन मृदालवालेपरिपूरितो  
 क्षिप्तपित्राण्यतलेनदग्धः ५१ कर्कषुमडामधुनावलिप्र पंकेतलिप्रः कुण्ठां वृषिकः प्ररोहमापात्यनलेनदग्धः क्षीरातसीलिसतनुशखी ५२ अथविद्युत्त  
 चिकित्सा मधूकमुजानिलमाषडूर्णैः मशकदुग्धैर्विनिषितमूलः प्ररोहयत्वेवतनश्चविद्युत्तिपातदग्धोऽस्यचिरेणसम्भत् ५३ अशीरमुक्तामधुदुग्धलिप्रः सिर्ताक्षिपी  
 वज्रहत-प्ररोहेत् सिताविदारीतिलनागजिह्वकुक्षीमूत्रपयोऽवृषिकः ५४ शीतोपचारैर्जलजातकंदशेकालपंकेर्वृक्षोविलिप्र दग्धप्ररोहकृतेयशखीसि  
 वेद्यथाशुष्यतिनैवलेपः ५५ अथवातजन्मचिकित्सा संभैरुजंमधूर्ध्वतमथरसनयावधवातादिजन्मलक्ष्मास्तोदुवरत्वकूमधुनसितादुग्धलिप्रचपञ्चान् मूले  
 सप्ततमृत्तासुकरिभरिनेमैचमेत् क्षीरतोयैस्तस्मात्स्यः पलाशीघृतपिटपदलापुष्पित-स्याफलाद्यः ५६ अथान्यतरुपीडितचिकित्सा मूलेखनित्वापरिपूर्क  
 शृङ्गि क्षीरावृषिकोऽजब्रह्म-फलाद्यः स्यात्पादपोमर्दतपीडितोपितहावदानाभ्यरुतिस्थितश्च ५७ अथस्यासंतरतीततनचिकित्सा विडंगदुग्धावृषिकेकद्वयोम  
 धूकूर्णैर्मनितचमले स्यान्ततरस्यस्पृश्यादपस्यमृजोमपाभ्यामपिपूरणं च ५८ अथगर्भद्विजादिनिवासदुष्टतनचिकित्सा करीषमास्तीरितरेपस्तान्त्रज्याह  
 स्मादिनिवासितस्य कृत्वालवालेपरिपूर्वमृद्धिर्मध्वाजलेपोवुपयोनिषेकः ५९ अथमंसर्गदुष्टचिकित्सा मध्यस्थितोदुश्चनिहतनीय संसर्गदुष्टः सुखमाशुधते  
 उदृत्यशृत्तासुमद्योतुर्धर्मिदुष्टोऽवृषिकेतोपि ६० स्यान्तारोत्पपरिरोपणीयोऽपवासमुदृत्यविधागर्भे प्रज्यालमृद्धि-परिपूर्वितोये मरोपचूदुष्टतनच  
 सिचेत् ६१ अथ रुनुधर्मविपरीसितोतसमुपाचरेत् दुग्धावृक्षपे सेकोदोहरादप्रतिक्रिया अस्मिसे अथमनादौकापीरक्षानरोर्धमवचनातैस्तनैर्देव  
 ताराधनेतया ६२ वंपेनिलान्दस्तामसिकष्यार्द्धमृदालकालपरिपूर्वतेषा क्षीरासुदुग्धैश्चविलेपनंसात् दुग्धार्जुनत्वक्कमिनुसयोनि मेकोजुमालाफलपु

अरुहे ६४ अद्योपचादुदतविक्रिस्ता दुःखावृत्तेकोप्युपचारदुष्टतरेनवेमुष्मफलाभिरुद्धे लेपतिलहीरघृतैश्चमोक्षोद्यन्तिनैरैषधूषितेपि ६५ यदोम  
 धादिमंमर्गमद्यपनपेक्षितम् आलवालचसम्पत्तदाभूषणविवरण ६६ मगनपादुपतत्पत्रक \*लोत्पकुसुमोऽङ्गिप\* कुचमवालोऽसैकात्पाच्छावाहृदिवि  
 वर्जित ६७ मध्यामधूषित हीरववर्णावुमिचित. हरित्यत्रत्यरफलोदुम. स्नाकुणपादपि ६८ पत्रयस्वरुद्धेपूर्वाक्तंतत्कार्यहितमिच्छता तिलनैलादिकेसी  
 तकातेद्याद्विवरण ६९ शर्करातिलगोहीरलेपान्तेकाञ्चसांवुत अङ्गिपानांसमस्तातांशेषशाम्यतिसर्वथा ७० ~~मगनपादुपतत्पत्रक~~ कृतोपचारो  
 नमदाहृदिमायातिपादप दीवात्स्यातांशेरोपरोष्मोसावत्पपादप. ७१ कटुंगनिलोदमवाविडंगमिदार्थरुग्णरजनीद्वयेन ससाधितंहीरमुतेष्टतंयत्रसो  
 पत्तपातुर्विवर्णोऽङ्गिपा. ७२ अथलावद्विक्रिस्ता धवदेतसतकीरीप्रिपद्भुन \*वल्कले पयसिद्वैविलिप्तातांश्चाव शाम्यतिशाम्यितां ७३ तिलमवशतपु  
 ष्पाम्पधूरपत्रकपित्तजलेतिषेकात्सावशमितिस्तूरंग गुडसतिलपपोनि. सेचितातांतेकामनवतिमुत्तमपैषाप्रुष्पपत्राभिरुद्धि. ७४ सुरजित्पादिकारी  
 पनकोरीरप आतगरजमिदुष्टशीकुतनुचरोधै सुरतत्जनदुष्टै प्रस्यसात्रेविपाअनवतिचतिलतैले रोपनुत्तादपातां ७५ विडंगरोधसंमिश्रसितादुग्धावु  
 मेवत शीतकालेहितमन्त्रततादिरपितासदा ७५ आलवालचमृदतिलदुग्धावुसेचते शीतकालेनतातांवेदिरपातांविशेषतः ७६ जानसेक सदाश्चो  
 नतादिर पित्तानवेद क्रियापद्योविताकामीतत्रसर्ववशाविना ७७ शास्त्रेषुप्रोभावहवोनित्ताइतनुज्ञातिखिताःकिमत चिकित्सितंतकुशलेदिधेयं  
 विचार्यव्याविहितपुत्रेषु ७८ यंचोसिंश्चकपाणेच्यपूर्णतामष्टयोगमत् चिकित्सितंतुमागतदुःखामोविश्ववलने ७९ इतिमिश्रचकपाणिविरचितेदि  
 श्वयस्त्रेअष्टमउपदेशसप्तम ॥८॥... ॥कुमुदफलविनच्छबीजमादायमृगकृदितमथकरीजंमाहिपतापित्रवे दितमतिपावबुद्धनौतदुपजनपतिकरवी  
 रकोतुकस्माञ्चलोके १ पके मीनपलायुनीहनिहृतीजमधूकान्नजापावत्सप्रदिनततोरविकरैरुद्धसंशोधयेत् दुःखाप्यपुनर्निधायविधिवचांकोल

तैलादितः सुप्तं हृतीतौ त्रिजनाचिचकरं स्यात् २ एतद्वीजं च वराहरकवसाभिहितपरिभाषितं सत् अंकोलतेलेन दिनं तदुप्तं सजेथकारत्तनां विचित्रं  
 ३ कोतनीतवसामं सदनं कस्तूरभाविने वीजमाचतावुनमारोहति फलमपि ४ दासोद्विषे यो सुखिरविधायकस्येव वीजैः परिपूरितं तत् संलेपितवत्समाप्रवृत्ते  
 स्तिसराकारफलेन वै ५ कूष्मांडवार्तिकपरोलकादिबीजवराहस्य वसाविजाय उप्तं मुसिकं च फलानि स्त्रीरहस्यतस्थो निरुधातिचित्रं ६ मध्याह्नादुत्तिष्ठति  
 शोभाकिरागैः सूपस्य वार्तिकं बीजं वलिपुत्रे विधाय सुखिरं कूष्मांडकोमले दित्वा गौक्ष्य विलिप्य सप्तपक्षे सप्तमद्योतस्वमये फलं वित्तुते कूष्मांडसु  
 लभत ७ अंकोलतेलेन वराहनकवसादुत्तिष्ठं वलुवीजमात्रे उक्तान् भौकराकां वुसिकसंघं प्ररोहं कुरुते तिचित्रं ८ आश्वयं बीजं शशकूर्मरक्तैर्दिग्गतवारं  
 परिभाषितं सत् दुग्धावुसिकं तस्मात्प्रभं फलं विधत्ते वलुसर्वकाले ९ अंकोलतेलेन वराहनिशं बीजं करैरुहं गीतुपूर्णं सितावुनारोहितं तत्सुलोनाचित्रं हि  
 लोके विततिचित्रं १० अंकोलतेले परिभाषकं रंतकोमुदंगेन मभाविने च स्थितघरे वैकरकां वुपं कतेषु सुपुष्पकुसुमं प्रसृजे ११ करीषकोलास्थिविदग्धगर्तं  
 लंघ्यावापु कमानुतनं उप्तं मुसिकं वलुभूलकं स्यात्पुष्पातमं चित्रकरं च लोके १२ अपवृत्तिचित्रं करं शकृदिङ्गं सुरसेनसितीयं मालवालैरवलिमिश्रिते  
 न दुग्धमसृष्टं फलानि धत्ते मनोहरा लोका विलो वदस्य १३ इहोदिकानि पुरुषमालोचिते वद्यो वा विरपश्चजातं सवामनपुष्पफलो विधत्ते सदैव लोके विततो  
 तिचित्रं १४ मूलसदाकोलवराहरकमंदोवसामं कथितेन सित्ता मिष्टान्मया मय फलैः सत्ता विफलमिह ते कदलीतिचित्रं १५ विडंगपट्टी मधुकोलसुदुर्गैर्वस्य  
 र्गमिन्नुत्तमपुत्रे लितो विलिख्यो वुपनीति सित्ता स्य कोद्विष स्यान्मधुरं स्यान्वात् १६ विडंगपट्टी नपुशकं रावुहीरैर्निषिक्तोऽस्तफलं सभावात् धनैर्वकं  
 देविरपापि सत्सु लोका विधानि फलानि चित्रं १७ वराकादीधत्तु कविका रुमिरा राजी घनामत्रके संस्थाप्य सुरसैर्दिनतिचित्रमितीतेन दुग्धं लंभत आलिप्य  
 यमशमुपू यं वरुशं न धूपितं सेवितश्चैच्छूणाचारमेरकालकुसुमं धत्ते फलान्यपि १८ वालाद्विपं पाति विदग्धं तत्र चित्रं च बीजानि विलेपयेत्त गोवत्स



विद्विज्जलः सभनेतादृक्फलानीहविचित्रमेतत् १९ छिलकंभीषतसुगतसर्वक्रिनामंददधोलिहिरूप कुलपलवणसीदमर्षिपयोजि. दुग्धानोतिः  
 परिविचितोऽहोविह्वलनेधनेकालेसकुसुमफलेकापनश्चिमेतत् २० विलिखनध्वजविडंशुधैर्जनागुणंतलचर्मवक्ष दुग्धावुसेकादिरपसशाक  
 धनेचिरपक्षफलंविचित्र २१ दुमसफलताशराविलेखाईलचर्मेण वक्षपक्षफलंधनेविचित्रचित्रकृत् २२ नसेवनीपादिरपा कुलपक्षकायावु  
 नातफलपुष्पाश करोतितक्षलवणमुनलक्षककारिकाकिंशुकतोयसेकः २३ विचित्रीबदरपार्थफलानांकाचसेवितनस फलपाकं सिंघुकावुष्टतलिप्त  
 फलेविपाहिनेवचिरमत्रविचित्र २४ कर्माधीपार्थफलाल्पकीलतपोधनेरंडसिराक्षिकानां कजापसेकात्सकलहुमाणकरोतिमश्वफलपाकहाविं २५  
 सद्योहतसकागत्सुनस्रधचचर्मेण सुवक्षपांचशराबाधफलपाकेनजायते २६ श्वयपुष्पचित्रे उमेसमुत्साद्यहपरिकाउवारवधंमृद्युनमानवाले सितं  
 धनोशीरजलवुमेसत्सुगयिचित्रमुमन प्रसूते २७ विदारिकंदेक्षुरतेनलितामूलेदुमश्चेक्षुरतेनसितं हतालवाल. कुसुमानिभूरिमदाविधनेकुमुकचलोके  
 २८ समसुवक्षपलतोसितं सुधूपितःकुदरूपकेन पीतानितुलानिवधंपकस्यःशामपलाश कुसुमनिधने २९ निशाकेभुककर्मासीरोधुतेपै सुसिचिन्  
 विधनिकनकं तद्वत् सुवर्णजकुसुमसितं ३० मजिष्टाहिगुक्षीरकपोतासकृविमर्दिता सौराष्ट्रीहृत्सितंपुष्पसुवर्णमंकरोतिच ३१ धनवदिरकपाली  
 कुक्षीररुचस्तुहृत्सितंजलनिवेकैर्लेपतेश्चापिशखी कुतुनसुरजिह्वामूलसंचेपाण्डैविगतमुज्जिष्ठः स्यात्सुगुणः ३२ एलानखत्वक्तगरो  
 वृकुक्षमासीधतोशीरकव.पसिता सुगंधपुष्पाश्चवेतिनवी सपुष्पिका कंदजपादिकाश्च ३३ लनादिरपयोरुतेमृदुनसनिधापच सिकेदुग्धांबुः  
 निःपुष्पश्चिह्नं चमदाभवेत् ३४ नकांजुतगरीश्वरत्वक्पत्रजलतेविना चित्रसौरस्यपुष्पाः सुजीवीनेमार्तिमालिका ३५ एलाडतोशीरघनावुकुक्षचक्ष  
 पत्रिकाचकहृत्जरीता चूर्णचदनायनदवुसिता सुगंधपुष्पाविरपालतासु ३६ मदारसंधेऽदितिगीतायाक्ष्माउवलीखतुनलनागे सधूरितामेनप

मृत्तिकादि सितसदास्थूलफलानिधने ३७ निधायकै मृदुनरुपं पूर्वमृत्तमयानां परिपूर्णमश्नात् यातीविधनेकुलापां वसिता वसंतकाले कुतुमा  
 नपीह ३८ चूर्णयवातातिलमिश्रमिश्रस्निग्धादि नृत्तेमिले उर्ध्वशृङ्गादिरपेक्षतुल्या भवति वल्योजलदुग्धसिता ३९ अथमतांते फलचित्री  
 करण मधुकपुष्पैर्मधुमिश्रकुशसिताघृतसौद्रपुतैश्चपिष्टे आद्याघृतेयद्विद्वपस्पूलफलं वतस्यास्थिविवर्जितस्यात् ४० गुजामधुदुग्धवर्षकं रज्यमधुक  
 पुष्पाणि विहीर्य कोड अंतर्तिधायोपरिवत्सविद्धि लिखितरौ स्यात्फलमस्थिवर्जं ४१ जीवेतिकापत्रमन शिलात्मजिहिकादारु निशामवैश्चगीजाविदु  
 थैः सति तैर्द्विस्त्रिंशत्काफी किं स्याच्च तनीलतूला ४२ कार्पासिकामवतिशपलाशतिलपूरिता मूलितरेबुसे सितारक्ततूलफलानवेत् ४३ त्रिफलाशाल्मली  
 त्वक्त्रिः सति शुकुशसीधुभिः लेपात्तेकाच्चकाफी सीहरितूलफलानवेत् ४४ कासीमतीलीतिलनामपटीद्वानिशामुग्धमधुचूर्णलेपात् तदंबुसितारवतु  
 पीततूलकार्पासिकी स्यात्कुक्कुलैः क ४५ चूर्णयवातां परिलोड्य देसुरसेतसिताज्वविडंगधूपै तु धूपिताऽतसापरिपाककाले शक्तां न्वेष्टे फलाहित  
 श्वत् ४६ पूर्वोक्तयोगहितमस्पृशतस्वजावतीरुता अमितकानेपात् समस्तवल्ली विटपाथ्वरम्भसुमिष्टमेदस्विफलानवेति ४७ कस्तूरिकागंधर्जः सुगंध  
 तोयेन संतृप्ततल मुपकः तनुत्पसौरन्मरससथे कुकोडो न्वेष्टे तरोहितं ४८ जलैः लोशीरमुक्तां वृत्तिकश्च दिनविशंकं तथा सौरन्संवाही भवेदीक्षु  
 रतो हिवै ४९ विचित्रकरलेयोभाकिं पंतो लिखिते मया ५० द्रव्याश्चतुरै र्मे शस्ये लोका नुसारतः ५१ विदथहमाह्नादि यथेस्मिन् विश्ववत्तरे चित्रीकरणमुलो  
 मुलासेन वनेन च गान् ५२ इति श्रीभिषग्वर्यकृपाणि विरचिते चोदी कीरणवने ध्यायसा ॥ सवत् १८२५ शके १७८० काः लुनहृस्ती नवमा लिखितलक्ष्मी  
 नारायणेन भक्तावरस्यपंडितैः ॥ अरितु ॥



## ॥ विश्ववल्लभ ॥

प्रीगणेशाय नमः ।

प्रीराघवैन्द्राघिसरोजयुगलं यत्त्वा गुरोरपि तया कथयामि सा(शा)श्वत् ।

ज्ञानं जलस्याय तदाश्रयाणां विधिं दृष्ट्वाणामपि रोपणाद्यं । । 1 । ।

यावन्मानं जलं वै धरणिगतगतं ज्ञायते यैश्च चिह्नेर्पावदहस्तादिभिस्तत्पुनरपि च शिवं यद्विज्ञातोभियाति ।

पाषाणाद्यन्तरं यन्मधुरममधुरं शर्करा वाप्यधस्तातृत्सर्वं संतुबेहं सकलजनहितं वीक्ष्य शास्त्राणि श्वत् । । 2 । ।

साधारणाननूपारं च जांगलान्पर्वतान्वितान् । देशान्निमित्तजान् श्रुत्वा वदेत्सर्वं विचक्षणः । । 3 । ।

आनूपे निकटे यथोक्तमतिभिर्नीरं भवेज्जांगले दूरे स्याच्च मरुस्थलेश्मनिकरे देशे सञ्ज्ञे पुनः ।

एतन्निश्चितमस्ति यद्यपि तथाप्याख्यामि भूपाग्राहान्प्राक्शास्त्रोदितमार्गमात्रविशदं साधारणे पर्वत (ते?) । । 4 । ।

दिग्विदिक्स्थाः शिराश्चाष्टौ श्रेष्ठान्या नवमी शिरा । अयस्यतोर्ध्व(ध्व?)गा या तु साऽजयानुवहा स्मृता । । 5 । ।

पर्वताद्बृक्षमूलाद्वा शिराधो याति निज्ञीरे । सर्वाः शिराः क्वचित्सिध्दा दृश्यन्ते कंदरासु च । । 6 । ।

अन्यमानेतिकठिना मृच्च पाषाणसन्निभा । पर्वटाश्चाभिघातस्यास्त(त?)दध्नः स्याज्जलं बहु । । 7 । ।

अथ जांगले योगः ।

जलाष्टा(श?)यविवर्जिते भवति वैतसो द्वयंदा करत्रयमितक्षिती बरुणदिग्गताधः शिरा ।

तदा मुनिकरेर्मिता करयुगे तयो(या?) सार्धके क्षितीकनकसन्निभा तदनु पर्वटस्तोयग । । 8 । ।

वारुण्यां त्रिकरेण सार्धपुरुषद्वन्द्वे शिरा श्यामला यत्रोदुंबरिका भवेन्नरमितेऽधः स्या सिता शर्करा ।

पूर्वस्यां त्रिको भवेज्जलधाराऽधःस्याश्रिते (?) पुद्गले लोहाभात्वय पांडुरा च मृदनुस्यात्पुंस्त्रि (?) भिर्ददुर । 19 ।

अत्र योगद्वयम् ।

बल्मीकोर्जुनसीम्यगो यदि भवेद्द्वस्तत्रये चार्जुनादारुण्यां पुरुषैस्त्रिभिः परिमितं सार्धजलं निश्चितम् ।

स्वेताभार्धनरे सुधूश (स ?) ररुचिर्गोधा ततः शर्करा पीता चानुसिता जलस्य निकटे तत्रास्ति सस्वादु च । 10 ।

जम्बूद्वीपसमीपगाच्च मधुरं बल्मीकतो दक्ष (क्षि) णे नीरं स्यात्पुरुषद्वयेऽर्धपुरुषे पारावताभा दूषत् ।

बल्मीकादबदरी जलेशदिशि चेतोयं तदा पश्चिमे वक्तव्यं पुरुषैस्त्रिभिः करयुगे गोधा त्विति प्रत्ययः । 11 ।

अत्र योगद्वयम् ।

बल्मीके यदि सिंदुवारविटपस्तदक्षिणे पुमि ते तोयं सार्धनरद्वयेऽथ कपिला मृच्छर्कराच्छा कृभात् ।

कोलश्चेन्मिलितः पलाशतरुणा हस्तत्रये पश्चिमे स्यात्सार्धत्रिनरेष (ष्व ?) धः क्षितितलं स्वेतारुणा शर्करा । 12 ।

अत्र योगद्वयम् ।

बिल्वोदुंबरिके यदा च मिलिते हस्तत्रये दक्षिणे नीरस्यात्पुरुषत्रयेऽर्धपुरुषे नीचैस्तदा ददुरः ।

काकोदुंबरिका यदास्ति निकटे बल्मीकतः पश्चिमे तोयं पुत्रितये ततोर्धपुरुषे गौरा दूषन्मृत्तया । 13 ।

अत्र योगद्वयम् ।

प्राक्च (?) पिल (?) तरोः क्षिराल्पजलदा हस्तत्रयेऽधो मता क्षारा लोहसमा च मृत्त्वय क्षिरा शोणोत्तरे तन्मिता ।

बल्मीकः कलिवृद्धतो यमदिशि स्यात्पश्चिमे पुमि ते तत्पश्चात्स यदा तदार्धसहिते पुमिश्चतुर्भिः क्षिरा । 14 ।

अत्र योगत्रयम् ।

सद्माऽहेश्च करजदक्षिणागतं हस्तद्वये तदिशि स्यात्सार्धं पुरुषत्रयेऽर्धपुरुषे कूर्मे त (?) तो दे क्षिरे ।

कीर्त्तयेयं मधुकान्तदस्ति सलिलं वेदुतरे पश्चिमे सर्पस्तत्र पुमर्धके च धरणी धूम्राक्ष प्रस्तरः । । 15 । ।

अत्र योगद्वयम् ।

वल्मीकश्च कपित्थकात् यमदिशि स्याद्दुर्दुष्टस्तरोः प्राच्यां सप्तकरेभ्योत्तरगतं पुभिश्चतुर्भिर्जलम् ।

सर्पः कर्बुरको भवेच्च पुरुषे मृत्स्ना च कृष्णा ततः पाषाणः पुटकः शिराद्वयमयो सीम्यां जलेनाश्रयः । । 16 । ।

वल्मीकोत्तरतो यदास्ति तिलकस्तत्रैव दूर्वाः कुशाः स्निग्धाः पंचकरैर्मिता त्वय शिरा तत्पश्चिमे पूर्वगा ।

वल्मीको यदि नालिकेरविटपी वा तालवृक्षास्तदा पश्चात्पट्टकरतो जलं (सु?) मधुरं पुभिश्चतुर्भिर्मितम् । । 17 । ।

अत्र योगद्वयम् ।

वामेऽधोऽधो भवेच्च बदरी वल्मीकिका वा यदा प्राच्यां पट्टकरतो जलं त्रिपुरुषैः साध्वैश्च चिह्नानि चेत् ।

कूर्मः स्यात्प्रथमे ततश्च पुरुषे पाषाणको धूसरो याम्यां त्वाद्यशिरापरोत्तरगता तस्या अधः साध्वया । । 18 । ।

हारिद्रादामभागे फलि(णि?) निलयमधो तस्य हस्तत्रये प्राक् तोयं स्यात्पंचपुभिः सिततमभुजगः पुमिते पीतमृत्स्ना ।

भूमिः कृष्णा (?) ततो वै वरुणदिशि शिरा तत्पुरो दक्षिणस्यामोषध्यो वा जलं स्यात्तत्पुनलतिका (सू?) तत्र तोयं समीपे । । 19 । ।

अत्र योगद्वयम् ।

भार्ग्वी दन्ती रुदन्ती तृ(वि?) वृद्धसितदलो लक्ष्मणा मालिका वा तत्प्राग्ये तोयमस्ति त्रिनरपरिमिते स्निग्धपत्रेभ्यश्च ।

नम्रीका यत्र बाबा भवति च तदधस्तत्प्रामाणं जलं वा स्निग्धाः खर्वास्तया स्यात्सुविक्लविटपालंबाबाभ्यं यत्र । । 20 । ।

अत्र योगद्वयम् ।

भूमिरीभीरशब्दं जनयति चरणैराहता पुत्रयात्स्यात् खर्जूरी वक्रजीर्वा त्रिनरपरिमिते पश्चिमे तत्र तोयम् ।

पुष्पैः स्वेतैः पलाशो भवति यदि तदा कर्णिकारोऽथ कोलः सन्धे हस्तद्वये तत्सुरबसति च मत्कारिणश्चेत्त्रिवर्षात् । । 21 । ।

अत्र योगद्वयम् ।

सोष्णो धूमो यदि स्यात् द्विपुरुषमितितस्तत्र वारिप्रवाहो धूमेर्नीचैस्त्वधस्थं द्विनरमिति पय पांडुरीभूय नश्येत् ।

आचार्यभूरियोगा इह च कथिता (?) इथिबाहुल्यभीत्या व्याख्यातास्ते मयात्पा मलिनविरहिते जांगले भूमिभागे । । 22 ।

इति जांगलदेशभागः ।

8

अय मरुदेशे ।

नूनं चिह्नैः सलिलमधुना ज्ञायते भूमिमध्ये सम्यक्क्षारं मधुरमधुरं सन्मुने समतैर्य ।

लोकानां वै मरुनिवसतां स्याद्यथा शर्म सन्वत् तस्मिन्प्रायः करिकरनिभा पुष्कलास्याच्छिराया । । 1 ।

बल्मीकः सौम्यराश्वेदय मधुरजलं स्यात्करीराच्च याम्यां पानीयमष्टिपुंभिः प्रयमनरमिते पीतवर्णोऽस्ति भेक ।

रोहीतद्रोश्च पश्चादहिगृहमपि चेत्तत्र हस्ताज्जलं स्यात् पुंभिर्नीरं द्विषद्वि सल(व)णमय(?) शिरा पुष्कला पश्चिमस्या । । 2 ।

अत्र योगद्वयम् ।

बाल्मीको गौरवर्णो यदि भवति ततः पश्चिमस्थां समीपे पुंषंवाश्च शिरा वै शक्तिदिशि च शिली पुंमिते मृच्च पीता ।

बल्मीकः पीलुपूर्वो यमदिशि पुरुषात्सप्तपुंभिश्च तोयं श्वेतः श्यामो हि-(?) रो बहुलसलवणं पुंभिः हस्तप्रमाणम् । । 3 ।

अत्र योगद्वयम् ।

ईन्द्रद्रोः प्रारगहिगृहमतः पश्चिमे हस्तमात्रे तोयं पुंभिर्दशपुगमिते पुंमिते गोधिकास्ते ।

निःपत्रद्रोर्भवति मिलिता कटकारी त्रिहस्ते वारुण्यां स्यात् धृतिकरमितैरीशगाद्या शिरा चेत् । । 4 ।

अत्र योगद्वयम् ।



रोहीतःस्याद्बदरमितितः पीलुना वै त्रिहस्ते तोयं पुभिर्नृपपरिमितैर्वृश्चिकोर्ध्वं नरे च ।

श्वेता मृत्स्ना तदनु च मिष्टा—(१) —————(१) । 15 ।

ककीधुश्चेद्भवति मिलितः पीलुना वै त्रिहस्ते प्राच्यां तोयं बहुसलवणं विंशतिभ्यश्च (१) पुभिः ।

बिल्वः स्याच्चैत्ककुभमितितो वा करीरो द्विहस्तात्पश्चान्नीरं बहुलमधुरं तत्त्वसंख्यैश्च पुभिः । 16 ।

अत्र योगद्वयम् ।

पंचैकस्याः क्वचिदपि यदा सति—वल्मिकश्चेत् मध्यश्चेतो नरपरिमितं पंचपंचाशदंबु ।

वल्मीके चेदुपरि च कुशापांडुरा वायुर्द्वास्तस्याधःस्थं भवति सलिलं त्वेकविंशैश्च पुभिः । 17 ।

अत्र योगद्वयम् ।

वल्मीकेषु त्रिषु परिवृतोप्यन्यवृक्षैश्च मध्ये ही (१) तश्चेद्भवति पुरुषैः षष्टिभिः पीतमृत्स्ना ।

तद्धारुण्यां नृभित्तिसिकताधः समीयुक्पलाशात् —————(१) । 18 ।

अत्र योगद्वयम् ।

वल्मीकेनावृतमय भवेच्चैतरो (१) हीतकात्प्राक् पुंसप्तत्या सलिलममलं भूरिसंवाद् तत्र ।

निंबः स्निग्धो द्रवति च रसं तत्र नीरं समतात् चत्वारिंशन्नरपरिमितं भूरि चाच्छं सुगधिः । 19 ।

अत्र योगत्रयम् ।

वल्मीकादृक्षिणस्यां यदि भवति शमा ग्रथिभिर्भूरि युक्ता तद्धारुण्यां क्षतार्धजलमिति मधुरं पुभिराद्यैः प्रदिष्टम् ।

श्वेतैः स्यात्कटंकैः सा यमदक्षि पुरुषैर्वा री वासीतिसंख्यैः सप्तोर्ध्वं पुंसि नीपोहिभवनमितितः पंचविंशैर्नरैः (१०) स्तत् । 10 ।

अत्र योगद्वयम् ।

या सा(१)स्निग्धा बहु भुवि यदा पंचविज्ञैर्न स्यात् तोयं कृष्णा(१)त् त्रिपुरुषमधो मृत्तिका पांडुरा वा।

पुंसप्तत्या भवति च महानिबतो वामभागे पानीयं स्यान्मृदुघनदलान्सुम्बरास्तद्विहंगा । । ११ । ।

अत्र योगद्वयम्।

गुल्मीषध्वःसुहरितदला यत्र वा नीपक्षिपास्तब्राम्बु स्यात्तिथिनरमितं तत्र सप्पो(१)य देव।

एवं किं(चित्?)मरुभुवि मया प्रोक्तमन्यच्च लोकादन्यग्रांपादपि सुचतुरे रूहनीयं च ज्ञेयम् । । १२ । ।

इति मरुदेशविभागः।

C

देशे भूपे हरितजलजा औषधीगुल्मवत्यो भूमि-सा-(द्रा?)मशकमहिता वीरणबोलपावा(१)।

तोयं तत्र प्रचुरमधुरं पुमिमे धःस्थितं स्यान्निम्ना भूर्वा(१)त्रिकरपरिमितं तत्र तोयं प्रदिष्टम् । । ११ । ।

दंती रुदन्ती तु(त्रि?)वृता शिवा वा स्यामाषुपर्णी(१) गरुडामुवेगा ज्योतिष्मती व्याघ्रपदी बराही यत्रास्ति तत्राम्बु समीपवर्ती(र्ति?) । । १२ । ।

माषच्छदागुंद्रककोकिलास्यः(१) सलक्ष्मणालिदलैडुकीव्या(१)ब्राह्मी च पिंढारकशारिवाखे(१) नलतृणं यत्र जलं समीपे । । १३ । ।

स्निग्धद्रुमाणां निकरे लताभा याम्ये जलं भूरि चतुर्करे स्यात्। द्रोण्यां च निम्ना हरिततृणा भू समीकता नादवती जलाढया । । १४ । ।

आनूपदेशसमीपवर्ति (१) सुनिश्चितं भूरिजलं च यस्मात्। अतो हि चिह्नानि च भूरिकानि(१) किंचिल्लिखित्वा समुपेक्ष्यती(ता?)नि । । १५ । ।

इति अनूपदेशविभागः।

D

देशे साधारणे तोयं सर्वत्र परिकीर्तितम्। अर्वागदशकरात्तत्र चिह्नैरिति च भूरि तत् । । ११ । ।

पार्वतीयेषु देशेषु त्रयं संभवति ध्रुवम्। ज्ञात्वा तद्देशमानं च बदेत्सर्वं विचक्षणः । । १२ । ।

E

सारस्वतोक्ता विशदः कियंतो मयाय योगा लिखिता विचार्य। उक्ता वराहेण च ये च वान्येर्देशे ब्रूवे ह खलु पार्वतीये।। 1।।  
 बोधिद्वमोदुंबरिकापलाश्वन्यग्रोधयोगश्च भियो यदि स्यात्। पुभिस्त्रिभिस्तत्र जलं च तेषामधस्तले जांगलके च भूरि।। 2।।  
 स्निग्धाम्ब निःक्षिद्रदला यदा स्युरनोकहा गुल्मलताः सदुग्धाः। चित्रस्वनाः पक्षिगणा वसन्ति तत्रांबु मिष्टं निकटे प्रदिष्टम्।। 3।।  
 खर्जूरिजंबूक्षतपत्रिनीपाः समिंदुबारावटनक्तमालाः। औदुंबरी सैव च काकपूर्वा बिभीतकस्तत्र जलं त्रिपुंभिः।। 4।।  
 पुष्पप्रधानास्तरवो लता वा जात्यादयः कुब्जकवंपकाद्याः। स्याद्वाटिभीनिंबकबीजपूराः फलान्वितास्तत्र जलं निरुक्तम्।। 5।।  
 तालद्वमौ यत्र च नालिकेरी सत्काचनारस्त्वय वेतसो वा। अन्योपि वा पर्वतमूर्ध्नि वृक्ष स्निग्धश्च तत्रास्ति जलं प्रभूतम्।। 6।।  
 उक्ताः पुरा निर्झरसंज्ञका या देशे भवेत्सा खलु पार्वतीये। पाषाणसंधेर्दुममूलतो वा सिध्दौ (?) व निर्याति न तत्र मानम्।। 7।।  
 अनुपदेशे त्वय पार्वतीये शिरोदभि (?) भूरिजला च द्रष्टा। तीर्थेन्यदेशे पि च देवताग्रे भूमेरधस्तात्स्वचिदूर्ध्वगामी।। 8।।  
 प्रागुन्मुखोदुंबरज्भा (?) जनाभा वैदूर्यकावतुष्टुतिमीकितकाच्छा। पलालधुम्रा कपिला शिला या तस्याः समीपे बहुतोयमस्ति।। 9।।  
 कौशेयमाक्षीकघृतोपमा या पारावतेंदुप्रतिभा शिला या। तत्रास्ति तोयं क्षणमेति शीघ्रं शिलायवा या गगनान्विता स्यात्।। 10।।  
 सशर्करा नीलपुटोपयुक्ता कु (ष्पा?) च मृद्यत्र सशर्करा वा। गोधूमभा मृत्सिकता च यत्र पीताथवा मृन्मधुरांबु तत्र।। 11।।  
 ताम्राच्छभा शर्करयान्विता या कषायमल्पं सलिलं च यत्र। त्वापां हुरा या लवणेन तुल्यं ————— (?)।। 12।।  
 गुल्मद्वबन्धः कुशरूक्षसूक्ष्मसखि (च्छि?) त्र (द्र?) पत्रा न च तत्र नीरम्। प्रीपार्णि सज्जुं न जाकबित्वाः सशिंशिपाः पार्यधवाश्च यत्र।। 13।।  
 दुर्वाजंबूकुशपिचुमहानिंबपीलूपवासा प्राकृष्याणां भित्तिरिह जले योगतो जांगले या।  
 पादोना सा भवति स गिरी जांगलानूपकेर्द्धा वानूपे सा मुनिभिरुदिता हस्तमानेन देशे।। 14।।  
 उरह्यो देशश्चतुरपुक्तैस्तपमध्याधिको वा निर्नीरोयं (?) तदनु च भित्तिः कल्पनीया तथैव।

उक्तं चिह्नं भवति हि यया तच्च तत्रैव वाच्यं दूर्वाद्यं मन्मुनिभिरुदितं मानभेदादिशिष्टम् । 15 ।

अस्मिन्नुदगलं वागिभरुद्घाटितमृषेर्मया । जगद्यनीन् (?) उल्लासं प्रथमं पूर्णतां गतः । 16 ।

इति श्रीमिन्नचक्रपाणिविरचिते विस्ववल्गुभे उदगलनिरूपणे प्रथम उल्लासः ।

द्वितीय उल्लासः ।

ज्ञाते जले तत्र जलाशयानि कार्याणि नानाकृतिमानवन्ति । ग्रामेषु तानीति ययावकाशं स्थानं च मानं च ववहिर्ययोक्तम् (?) । 1 ।

तडागवाप्यावपि कूपकुडैः सदेवबाते कथिते मुनीन्द्रैः । विना प्रमाणेन च कृषिकाल्प्याकुल्यालवालादि यथेच्छया स्यात् । 2 ।

वृत्तं चतुःकोणमथ त्रिकोणमनेककोणत्वं च दंढलवम् । तयार्धचन्द्रं रसधा सरः स्यात् ज्ञेयं प्रमाणं ज्ञानितस्य तस्य । 3 ।

महासरोवृतमयार्धचन्द्रं भद्रं चतुःकोणमथो सुभद्रम् । नामानि केचित्सरसां वदन्ति बुध्दं न तैर्ग्रहरहस्यमत्र । 4 ।

आकारभेदस्त्रिषु मानभेदः एकत्र युग्मे रचनाविभेदः । परस्परं संभव एव तेषां कुडैः समं लक्षणशं (?) करः स्यात् । 5 ।

श्रेष्ठं सरो दहसहस्रकेन मध्यं तदर्धेन तदर्धकेन । कनिष्ठमेतानि ययावकाशं मानाधिकाल्पानि भवन्ति स (श) स्वत् । 6 ।

गिरिद्वयोन्तरबध्दपालिर्द्रोण्यां गिरिराविज्ञालभूर्वा । अल्पव्ययेनैव महान्स्तडागो भवेत्तदा संततभूरितोषः । 7 ।

अग्रे यदा भूः पृथुलासमतादुन्वाजलस्यागमनं बहु स्यात् । अल्पांशुतो निर्गमभूश्च तत्र पाली कृतायां हि महत्सरः स्यात् । 8 ।

आपालिशीर्षं धरणीतलाच्च सोपानपत्तिः (क्ति?) विदधीत धीमान् । पालेश्च दाढ्यार्यमिह प्रलेपः कार्योयवा ह्यन्तरगः सुधाया । 9 ।

निम्ना धरित्री परितोऽनुपूर्वा भवेत्स्वतः सिध्दतडाग एव । मानं च बात्रास्त्यथ मानहीनं स्वल्पं च वैसंतकगर्धकाद्यम् (?) । 10 ।

तडागमध्ये त्वयः भूपतीनां भवन्ति केलीनिलयानि तीरैः । मोस्तव कार्या जलकेलिसिध्दौ मार्गश्च तेषां वतः सेतुनी वा । 11 ।

नदात्रिकूटकमुखी च वापी भद्रा च षट्कूटयुता द्विवक्त्रा । जया त्रिवक्त्रा भवकूटिकास्वीचतुर्भिरुक्ता विजयार्ककूटा । 12 ।

विशालसोपानयुताय नालि कार्या समाध्दादिगुणा च तस्याः । साध्दायवा कूटयुतापि मध्ये समंततस्तोरणकेतनादया (?) । । 13 । ।  
 दिमुखो विजयः प्रा(प्रा?)तो दुंदुभिश्च मनोहरः । कृपाञ्चहामणिभ(र्भ?)द्रो जयो नंदोय शंकरः । । 14 । ।  
 आरभ्य यावच्च चतुष्करं ते व्यासे कमादेककसाभिवृद्ध्या । भवन्ति गर्तानि च कृपिकाञ्च कुत्पालवालादि विनैव मानम् । । 15 । ।  
 कूपस्य नीचैर्यदि बालुका स्यात्सारद्वकाष्ठः कगरादिभिश्च । स्याप्यायमवीहपुषादिभिर्वा (?) यथा न रुध्नेत शिरा जलस्य । । 16 । ।  
 ग्रामस्य कूपो यदि मुख्यभूतो जलाशयः स्येन--- (?) कार्यः । विदिगतो दाहकरः क्रमेण बालावलानाशकरः सधीद (?) । । 17 । ।  
 शिरा यदा नास्ति दिशासु यत्र कूपो विदिस्स्थोपि न दोषकारी । ग्रामाद्यदा दहसहस्रे (स्त्र?) के वा वृक्षादिसेकाय न दोषदोसी । । 18 । ।  
 भद्रं सुभद्रं परिधं च नंदं कुंडं चतुर्धा चतुरस्रमाद्यम् । भद्रैर्द्वितीयं तृतीयं सभिद् (?) मध्ये चतुर्थं प्रतिभद्रयुक्स्यात् । । 19 । ।  
 कराष्टतो हस्तज्ञतानि तानि चतुर्मुखानि (?) तु चतुर्दिशासु । मध्ये गवाक्षे सहितानि कोणे शालाचतुष्कादियुतानि कुर्मः । । 20 । ।  
 अगाधगाधं स्वत एव सिध्दं तदेव धातं विविधाकृतिः स्यात् । यथास्ति तत्तस्य तथैव कार्यं शिलासुधाभिश्च निबध्न वै । । 21 । ।  
 शिला यदा याति च बापिकादौ निश्चिन्यमाने कठिना मृदुर्वा । तस्याः परीक्षार्थमुनिग्रदिष्टान् (?) वर्णानिदानीं कथयामि स (श?) चत् । । 22 । ।  
 ताम्राश्विता ताम्रनिभा विचित्रा विद्वन्विता मौक्तिकहेमवर्णा । मृगोपमोष्टस्य नखानुरूपा चंद्रातपाभाऽग्निनिभार्कवर्णा । । 23 । ।  
 भस्माजनाभा स्फुरि (स्फटि?) कोज्वला वा नीलघृतिः पौंडुरभा शिलायाः । वर्णैर्विचित्रा हरितालभा वा याम्या (?) नना याति न भेदमाशु । । 24 । ।  
 शिलाप्रभेदाय च टंकुकानां वक्ष्ये ह्युपायान्विशदान्सुभूरि । यैरिषधेस्तोय इह प्रदत्ते वक्त्रं न कुठं भवति प्रहरिः । । 25 । ।  
 प्रज्वाल्य काष्ठैः सलिलेन सिंचेत्यलाशजंबूधवसादराणाम् । शिरीषवंबु (जू?) लकतिंदुकीनां भल्लातचिंचाबदिरादिकानाम् । । 26 । ।  
 काजिकेबदरतक्रकुलत्याः सप्तरात्रमयं योजयेदयो । बहिना सुपरितप्तशिलायाः स्फोटनं भवति तत्परिषेकात् । । 27 । ।  
 तप्ता शिला बर्णजलेन सिक्ता पुनः प्रतप्ता पुनरेव सिक्ता । तथा शस्त्रारजलेन सिक्ता विदीर्णतामेति विनिश्चयोयम् । । 28 । ।  
 शिला सुतप्तीगुहसर्जिकाभिर्निशाकणासार्षपतैलतोयैः । सकाजिकैर्या कठिनाभिषिक्ता स्फोटं प्रयात्यत्यपरिग्रमात्सा । । 29 । ।

निंबवल्कलपत्राणामपामार्गस्य भस्मना। गृह्य्या तिलनालानां भस्मना तिंदुकस्य च।। 30।।

गोमूत्रेण कृतं सेकस्तत्र पाषाणभेदकं। सतैलतक्रतोयेन गुहसिध्दार्थसंवरः।। 31।।

अबोर्जि(?) पाणार्कपयः शिखायाः पारावताधो ऋक्ताय लिप्ते। बर्कं न कुंठं भवतीह तैलतक्रे च पातेश्मनि टंकुनानाम्।। 32।।

टंकस्य बर्कं परिताम्य तक्रतैले निमुक्तं दूढतां प्रयाति। भृंगारकस्याय रसेन तैले क्षिप्रे तथा (क्षिपेत्तथा?) तद्गुह्यतैलमध्ये।। 33।।

क्षारे कदल्या मथिते दिनोषि(?) तत्पायित(?) लोहमयास्वटंकुकम्। न भंगमायाति च लोहदारणे न कुंठभावं भजते शिलातले।। 34।।

सुरायवध्दारगुहार्कदुग्धे संकोलते तैले दुपुतेनुपाते। ऋष्ये शिला लोहविदारणे वै न कुंठतां याति च तस्य बर्क(वत्र?)म्।। 35।।

क्षारं पयो यत्र च तत्र कूपे करोति मिष्टं ब्दिरं सचूर्णम्। यत्राविलं तत्र पलाशभस्मक्षेपात्पयो निर्मलतां प्रयाति।। 36।।

भवति ककुभमुस्तोशीरध्वात्रीफलानां कतकफलसमेतं लोहराजादनानाम्(?)। सलिलमपि च पूर्णं वापिकादी हि मुक्ते मलिनकटुकुग्धमिष्टमच्छं सुगन्धम्।। 37।।

पयसि सलिलपथ्या कुष्ट(?) मेलो कुग्धी कनकफलसुचूर्णं प्रक्षिपेदाविले वै। पयसि ब्दिरसारं श्रीफलेनाय साध्दं भवति मधुरमाशुक्षारमंभञ्च कूपे।। 38।।

उल्लासो द्वितीयो विम्बवल्कलभे पूर्णतो गतः। वास्तुश्चास्वस्य संवादीजलाशयनिरूपकः।। 39।।

इति श्रीमिश्रचक्रपाणिविरचिते विम्बवल्कलभे जलाशयनिरूपको द्वितीय उल्लासः।

तृतीय उल्लासः।

जांगलानूपसामान्यस्वभावात् त्रिविधा धरा। रसैश्च बहुभिः सा भिन्ना ज्ञेयास्तद्वर्णतो रसाः।। 1।।

मलिना पांडुरा भूमिः श्यामला धबलारुणा। पीता मिष्टाम्ललवणकटुतिक्तकषायिका।। 2।।

क्रमेण च रसास्त्वत्र ज्ञेया जीर्णमतं त्विदम् । मृत्तिकास्वादनात्ते च ज्ञायते मे मति ध्रुवम् ।। 3 ।।

बल्मीकगर्तपाषाणबहुलादूषराक्षुभा । दूरोदका शार्करिला सविषा तरुरोपणे ।। 4 ।।

यस्मिन्देक्षे तुषारेण दह्यन्ते वल्नरीद्विभाः । बिबिकाकटबहुले न कुर्यात्तत्र वाटिकाम् ।। 6 ।।

मृदुःसमासन्नजला हिता भूस्तरुरोपणे । तत्रारामश्च कर्तव्यो लोकद्वयहिताय च ।। 6 ।।

सप्रस्तरा वा मृदुलायवा या प्रतप्तजांबूनदभा धरित्री । तस्यामयत्नेन च गुढ(ल्म?) पुष्पपुंनागराजादनचंपकाश्च स्युः (?) ।। 7 ।।

आनूपजा स्युर्मृचकुंदजातीश्रीबडिकाकेतकिकेतकांबु । रभाश्चमारो लकुबोपि जंबू मध्वादि चान्ये द्रुमवल्लिगुल्माः ।। 8 ।।

रोप्पाश्चंपकपाटलाग्नबकुलाशोकाश्च साध्वारणे कोलोदुंबरनिंबपिप्पलवटा ग्राम्याः सचिंचाशनाः ।

अक्षाष्टोदमधूकशिगुकमहानिंबार्जुनाद्या द्रुमा दाहिम्यादिफलप्रधानविटपा पुष्पप्रधाना लताः ।। 9 ।।

धवधदिरपलाक्षावशध्वत्रीगुदीकाः शिवनिकरभशाकाश्लकी सप्तपर्षी । सुरतरुजनीकास्तिंदुकीजातिकाद्या व्रततिविटपवृक्षा जांगले ये प्रशस्ताः ।। 10 ।।

उक्ताः कियंतोपि मयात्र वृक्षा ऊहयास्तयान्ये चतुरैश्च पुंभिः । क्षितिस्वभावादचिरेण वृद्धिं प्रयान्ति ते पुष्पफलानिदध्यु (?) ।। 11 ।।

देवप्रभाबाध्दनिना नृपाणामतीवषत्नादहितप्रदेक्षे । वृद्धिं समायान्ति लताद्रुमाद्या भवन्ति ते पुष्पफलाक्षियुक्ताः ।। 12 ।।

बीजोद्भवाः कांडभवाश्च चान्ये कंदोद्भवा गुल्मलताद्रुमाद्याः । उक्तास्तयान्येपि च बीजकांडभवा विभेदं कथयामि तेषाम् ।। 13 ।।

चिंचाग्नचंपकमधूकपित्त्यजंबूपुंनागबिल्वबकुलाशनकांचनाराः । सधीरिकाभुपनसाक्षकनालिकेरीतालादिका सतिलकाः खलु बीजजाः स्युः ।। 14 ।।

जंबीरनिंबुकसदाफलबीजपूरनारिणसेवकरमर्दकचंपकाद्या । कर्णविदिमकमलाख्यकपांडुरागाः श्यामातिमुक्तकमुखा इह बीजजाः स्युः ।। 15 ।।

जातीगुलालतरुणीनवमल्लिकाश्च मल्लीजपातलकुंदशिबडिकुब्जाः । तांबूलिकामल्लिकेतकिकेतकाद्या कांडोद्भवा इह मया कथिताः कियंतः ।। 16 ।।

बिंबास्नुहीचंद्रकसिंदुवारश्रीबडिकाश्च वन्यवटाः पलाशा । सदाहिमप्लक्षमुनिद्रुवक्षा द्राक्षादिकाः कांडजबीजजाः स्युः ।। 17 ।।

कदोदभवा कुकुमशृंगवेगविदारिकासूरणपीतिकाद्याः । एतावजानीति च बीजकदसमुद्भवानीति वदति धीरा ।। 18 ।।

रंभादिका सति च कदकोदजानास्तयान्येपि समूहनीयाः । आरामयोग्याश्चतुरैश्च पुभिर्दृष्टा च पृष्ट्वा वनपालिनो वै ।। 19 ।।

गृहे निषिद्धा विटपा आसन्ना अपि तानहम् । विहिता अपदिग्भिदाविशेषात्कथयामि तान् ।। 20 ।।

गृहस्य बाह्या म(अ१)य बीजपूरजंबूहरिद्राबदरीपलाशाः । स्लेष्मातचिचार्युनकांचनारकरंजकाः स्युर्न शुभाश्च साक्षा ।। 21 ।।

वर्ज्या गृहे तन्निकटेपि वृक्षा विशेषतः कंटकिनः सद्गुधाः । फलैर्विहीनाः खलु कृत्तनीया आत्मोद्भवाश्चापि सुखार्थिपुभिः ।। 22 ।।

फलप्रसूतेरहिताश्च सर्वे वन्यास्तथाकोलविभीतिकाद्याः । एरंडसिद्धार्धकनीलिकापि न वापनीया गृहवाटिकायाम् ।। 23 ।।

पुष्पप्रधानाः सक्ताश्च वाट्यां फलप्रधाना प्रथिताश्च सार्काः । लताद्वयवत्पौषधयः सगुल्मा वाप्यास्तथान्ये गृहवाटिकासु ।। 24 ।।

शुभ प्राच्यां वटो याम्यां तथोदुंबरिका गृहात् । वारुण्यां पिप्पलः प्लक्षः सौम्यास्यां न विवर्जयेत् (?) ।। 25 ।।

गृहातिथिन्ना (?) यदि वा न दक्षे ग्रामादबहिर्बा यदि वाटिका स्यात् । तद्रोपणेयं नियमोयं दूरे रोप्या निषिद्धा अपि तत्र सर्वे ।। 26 ।।

आग्नेयमाभ्यनैऋत्यनिषिद्धा वाटिका पुरात् । सर्वं (पूर्व ?) पश्चिमसीम्येषु शुभा मध्ये क्षमारुते ।। 27 ।।

दुर्गे यथामानययावकाश्च कुर्याच्च साधारणवाटिका च । सर्वे द्वामस्तत्र च रोपणीया ग्राम्याश्च वन्या अपि नास्ति दोषः ।। 28 ।।

तस्यां चंपकमालतीकुरवकानिर्मलिकामूयिका श्रीखंडीकण (२ ?) बीरकुंदबकुला वासंतिका सेवती ।

कर्णिकुब्जगुलालहेमसुमना सिंदूरिका केतकी बंधूको मचकुंदकेतकिजपा निःपल्लीमु (?) किंशुक ।। 29 ।।

इति पुष्पप्रधानाः ।

भालूरोबदरीसालकरका-- (?) शनाश्रीफलाश्चैवामर्दकिनिबुपूगफिरसानूता (?) वटावत्यका ।

खर्जूरपनशः कपित्थकरहापथ्याश्च सांजीरका वंशोदुंबरिशालतालजटिला रोहीतकपाटला ।। 30 ।।

राजादनाशोककदंबजंबूजीभीरनारंगसदाफलदाद्याः । बीजादयः (?) रंभाम्लकदाडिमी च सनालिकेरीकमलाख्यकाला ।। 31 ।।



आषोटपिस्ती लकुचो विदामा -[आलेमूलखननेरंगार्यम्(?)]- तावूलकैलाशपतविमृदी ।

अन्येपि रोप्यास्तरवःसगुल्मलतान्विताःपुष्पफलोपभोग्याः । । 32 । ।

करमर्दकवशादीन्प्राच्यां वै रोपयेदुबुध । द्राक्षाप(पा?)रावतान्याम्या कपित्याम्बै(व?) पश्चिमे । । 33 । ।

सौम्यां लोकादिकानन्यान् यथावर्गं नियोजयेत् । वाट्यामुत्कांतरे तद्वत् श्रेष्ठमध्याधमान् तरून् । । 34 । ।

भूपरिष्ठाद्विहितस्य निरूपकः(?) । उल्लासस्तृतीयःपूर्णा यातोयं विश्ववल्तभे । । 35 । ।

इति श्रीमिश्रचक्रपाणिविरचिते विश्ववल्तभे तृतीय उल्लासः ।

चतुर्थ उल्लासः ।

पयोदकालोखिलबीजवापे वृक्षादिसंरोपणके प्रशस्तः । तत्रांबुदे वर्षति रोपणीया शरद्वसंती भवतीह मध्यमी (?) । ।

हिमागमो ग्रीष्म उभौ निषिद्धौ वापेयं ज्येष्ठः कथितश्च केचि(कैश्च?)त् । सर्वेपि काला विहितास्तदानीं यदातिपत्नो वनसेवने भ्यात् । । 2 । ।

मृद्वी च साधारणभू प्रशस्ता सर्वाग्निपारोपणबीजवापे । अयो विशिष्टद्वहिता च यादृक् वर्णादिभेदेन च सा निरुक्ता । । 3 । ।

उदुबरीतिदुक्वीरचिंचा बटाघराजादनचंपकाद्याः । सबंजजंबूपिचवो धरायां सप्रस्तरायामपिसंभवति । । 4 । ।

ग्राम्या अरण्या अपि ये द्वमाःस्युर्गुल्मादिवल्त्योऽश्मविमिश्रभूमी । न स्युःक्षितावभ्रकमिश्रितायां राजादनाद्या बकुला सचंपाः । । 5 । ।

स्वै(स्वे?)ताभ्रका या व(?)टिकादियुक्ता धरा प्रशस्ता न च धातुयुक्ता । -----

। । 5 (?) । ।

अजातशाखा विटपा प्रशस्ता संजातशाखाः खलु मध्यमाः स्युः । उद्भिन्नपुष्पा अधमाःफलाद्या न रोपणीया न भवति यस्मात् । । 6 । ।

ग्रीष्मे सप्तत्रा निकटेऽभ्रकाले संजातशाखाःखलु रोपणीया । वर्षासु सुस्क्ंधयुता वसंते रोप्या द्वमा अन्यमतं घनानि । । 7 । ।

निकृतिस्तुनि प(निष्प?)न्नहरिन्माखतिलं च यत् । कृष्टं च बहुधा क्षेत्रं तद्योग्यं वाटिकाविधी । । 8 । ।

उदेहिकादिकीटानां यदि शंका भवेत्तदा। वापयेदजगंधां वा शतपुष्पां हि तावता(?)।। 8(?)।।

गर्तं कृत्वायवा पूर्वं प्रज्वाल्यपूरयेन्मृदा। करीषेण च बीजानि भाविताभ्याज्यमाक्षिकैः।। 9।।

वापयेत्तानि यथास्थानं गोमये मृदितानि च। विलिप्य तिलबीजद्रुभस्माज्येनाथवा सुधीः।। 10।।

बीजमंकोलतैलाक्तं जीर्णमप्याशु रोहति। भवति द्विदलास्तद्वदेकाहेन च सर्षपाः।। 11।।

गर्तं निधाय सिकतामथवा सुपात्रे पूर्णं सवल्लभमपीह च नालिकेरम्। मासात्प्ररोहति सकल्लवणांनुयोगाच्छुद्धोदकैः प्रतिदिनं च तथैव सितम्।। 12।।

अंकोलतैलशकृता पयसा प्लुतं च गर्तं वपेत्सुसिकतापरिपूरितेयो। आखोटपूगतृणराजफलं सुसिक्तं खजूरिखारिकबदामकनालिकेरम्।। 13।।

तृणैः पलाशपत्रैर्वा तावदाच्छादयेद् बुधः। बीजधार्त्रीं धरां यावदंकुराः संभवति हि।। 14।।

समूलमृत्तिकायुक्तानिघ्नपांश्च समुधदेत्। बिडंगघृतमी (मा?) छीकलिप्तान् गर्तं निवेशयेत्।। 15।।

गोमयातिप्तशाखाभिस्क्रंधान्तारोपयेत्सुधीः। पूरिते मृत्करीषेण गर्तं सितैर्भसा बहु।। 16।।

द्वमा षोडशविंशार्ककरैरंतरिता कमात्। मध्योत्तमाधमा उप्ता ज्ञेया जी(ज्जी?) र्णमतं त्विदम्।। 17।।

तृणमुल्मलताद्यांश्च चतुस्तु(स्त्रि?) द्विकरांतराः। रोपणीया यथास्थानं वीथीस्वस्तिकमंडलैः।। 18।।

बृहद्द्वम(द्वद्वमा?) विंशतिभिः करैर्वा मध्यास्तया षोडशभिश्च रोप्याः। अल्पा अथोर्कश्च कृतांतरायाः कैश्चिद् व्यवस्थाय कृता मयेषाः।। 19।।

कर्णाबदामलकुचाऽम्लकबीजपुराः सदाडिमाः पंचमुनिपत्तिकरैश्च रोप्याः। चंपादिका मुनिदशार्ककरैश्च चिंचा रसालराजादनकानृपार्कैः।। 20।।

घना न बुद्धिं विटपाः प्रयाति दूरस्थिता वायुविभुग्निताः स्युः। तस्माद्यथाव्यासमवेक्ष्य सर्वे वाट्यां स्ववर्गे जलु रोपणीयाः।। 21।।

अशोकपुनागक्षिरीवनिंबाः सचंपका स्वस्तिकरांश्च वाट्याम्(?)। रोप्यास्त्वतस्ते प्रथमं च मृदीजातीफलिन्यादिलताः शुभाः स्युः।। 22।।

संक्षिप्य कियतामुक्तो द्रुमाणं रोपणे विधिः। अगमत्पूर्णतामव तुर्यं उल्लासको हययम्।। 23।।

इति श्रीमिन्नचक्रपाणिविरचिते विश्वदल्लभे चतुर्यं उल्लास' समाप्तः।

पंचम उल्लासः ।

अवृष्टिसिक्तस्थ नवाग्निपस्य संध्याप्रभाते जलु सेचनं स्यात् । यष्टयादिकं तन्निर्कटे निषेयं (व्यं?) यथा प्रवाते न विचाल्यतेसौ । । 1 ।

निक्षि (ब?) न्य चालवालानि समये परिषिचयेत् । यथोचितसुमृत्स्नाभिः संपूर्याय विचक्षणः । । 2 ।

यदालबाले जलपूरिते वै न शोषमायाति जलं चयामात् (पानात्?) । तादृगाविधे तत्त्वरया न देयमजीर्णमस्य प्रवदति धीरा । । 3 ।

विनातपं निपत्राणि म्लानानि विटपस्य च । दूश्यन्ते सर्वदा ज्ञेयाः क्षुधित (त?) स्तं (?) परिषिचयेत् । । 4 ।

प्रातश्च वर्षासु दिनस्य मध्ये काले सञ्जीते परिषेचनीयाः । प्रगेपराहे (हणे?) प्ययवा वसन्ते ग्रीष्मेय सायं हि सदाग्निपाद्याः (?) । । 5 ।

सेचनादिविधिः प्रोक्तः कालावस्यादिभेदतः । उल्लासः पंचमश्चात्र ग्रंथेस्मिन्पूर्णतां गतः । । 6 ।

इति श्रीचक्रपाणिविरचिते विश्ववल्लभे पंचम उल्लासः ।

षष्ठ उल्लासः ।

प्रचंडवाताच्च हिमाच्च धूमाद्गह्वेः कूमेर्जालकतस्तयाब्जो । संरक्षणीयास्तरवो प्रयत्नीरेभ्यो यतः स्युर्विपदोऽग्निपाणाम् । । 1 ।

आधारमष्टेः परितश्च रोपाद्वायोर्न भीतिर्भवति दुष्माणाम् । तेषामयो वाप्यनुक्लदेशे वि (व?) हनेर्निरोधादपि धूमरक्षा । । 2 ।

वह्नेस्तु यत्नः खलु मंडपादी कुर्याच्च देशे सतृणेषु दावात् । बिनावरोधीषधमंत्रपत्रैराब्जोः कूमेश्चापि निवारणं स्यात् । । 3 ।

मंत्रस्तु सारंगपद्धती यथा-ओम् स्वस्ति किष्किंदास्थितप्रकटपत्रकर्मातर्हिताकंडुलो (अंडलो?) पजीवितस्य हनुमानाज्ञापयति  
मूषकपतंगपिपीलिकाश्लभकरभान्वककीटगंधिकाविंविधिर (रि?) हैवनस्यातव्यं क्रममाणस्य शरीरनिग्राहः समावर्तयति तस्य वानरसिंहस्य क्रममाणस्य  
सागरकच्छांतरगतो वायुजीमूत इव नर्दति हुं फट् । ।

-त्रे (मंत्र?) पत्रे समालिख्य जप्त्वा तन्निबन्धेदभुवि । क्षेत्रे कीटपतंगाद्युपिपील्यादि विनश्यति ।। 4 ।।

अल्पद्व(?) वृक्षाणामन्तरे क्षेत्रे सघनं वापयेत्सुधीः । शतपुष्पां कुबेराक्षीं ततः कीटनिवारणं ।। 5 ।।

अल्पाग्निपाणामपि मंडपेन तृणादिभिर्वेष्टनकेन शम्भत् । पात्रादिनाच्छादनकेन कुर्यात्स्वल्पे तुषारस्य च रक्षणं वै ।। 6 ।।

चूर्णं तिलानां क्षितिजस्य मूले तथोपरिष्ठादिकिरेच्च भस्म । यष्ट्याग्नसंबद्धपटैस्तृणैर्वा बर्हेण तज्जालकमार्जनं स्यात् ।। 7 ।।

कृट्पा(?) यवा कटकिरोपणेन रक्षा द्रुमानां परिखाविधानात् । कार्यान्यथा वा चतुरैश्च पुभिः युक्त्या यथाकालमयोक्षिता वै ।। 8 ।।

समाप्तः षष्ठ उल्लासस्तत्पररक्षानिरूपकः । विदग्धदयाकादिग्रायेस्मिन् विष्वक्वल्गुभे ।। 9 ।।

इति श्रीमिश्रचक्रपाणिविरचिते विष्वक्वल्गुभे षष्ठ उल्लासः ।

सप्तम उल्लासः ।

विधाय रक्षां बहुधा तरूणां कुर्यादयो पोषणमीषधाद्यैः । वक्ष्ये प्रयोगान् बहुधानुभूतान्स्तेन्यत्र मांसिर्बहवो निरुक्ताः ।। 1 ।।

अथ कुर्ण (कुणप ?) जलम् ।

मेवाजसारांग्रचादिकानां मेदोवसस्त्वगून्धिरं समज्जम् । तोयेन बहूनी विपचेच्च सम्यक् पक्वे क्षिपेत्क्षीरमनुश्मनीरम् ।। 2 ।।

बलिं तिलानां मधु तत्र भाडि घृतं समुत्तार्य च कोशमदेशैः । निधाय भाडि बलु पक्षमेकं तोयं हि तत्स्यात्कुणकं (प ?) द्ववृद्धी ।। 3 ।।

दुग्धोदकं तिंद्रुकादपानां त्रियालभस्मापि च नालिकेयाः । आग्रादिद्वानां हितमंबु शालैः ----- ।। 4 ।।

अर्जूरबिल्वलकुवाञ्जननालिकेराः साष्टोटकाः सतिलसर्षपचूर्णदानात् । वृद्धिं प्रयान्ति पत्रशाग्रमधूकचंपा ग्रीह्यांबुना सञ्जलिना च विनातपर्तुः ।। 5 ।।

सर्वद्रुमाणां कुणपस्य सेको हितोस्ति सवत्फलपुष्पवृद्धी । विक्षेपतो दाहिमपादपानां धूपोपि हि स्थूलफलाशुकारी ।। 6 ।।

मत्स्याज्यविफलालिप्तत्रिफलाज्येन धूपितः । दाहिमो पक्वफलयुक्फलं तस्य बृहद्भवैत् ।। 7 ।।

कुलत्प्यूर्णववयितांनुसेको वृद्धिकरो दाडिमपादपानाम् । कार्पासबीजववयितांनुसेका मृत्सै (सी?) रमेयीस (श?) कृतश्च दानात् । 18 ।  
 श्विन्नाश्च माषाः सजला निरुक्ता वृद्धौ फलानां जरामलक्याः । दुग्धस्थं सेकात्सकलद्दुमाणां फलं सुमिष्टं भवतीति पक्वम् । 19 ।  
 मूले पुरीषे खलु कृक्कुटानां दत्ते निमिषालन (?) तोपसिका । अतीव पुष्पाणि फलानि धत्ते द्राक्षा सुवृद्धिं व्रजतीह शीघ्रम् । 20 ।  
 प्रियंगुसिद्धदार्यवचाहरिद्रा विहंगगुजातिलनिर्वकृशमाः (ष्णाः ?) । घृताम्बकणांबुविलोडिताः स्युर्वृद्धिकराश्चंपककेशराणाम् । 21 ।  
 स्कंधं च पालालमयो निधाय वचांबुशितो मधुराणि भूरि । फलानि धत्ते पनषोतिशीघ्रं मिष्टानि वृद्धिं व्रजतीह सम्बत् । 22 ।  
 कोशातकीपवशिफाश्रयाणां क्वायेन कृशमा (ष्णा ?) सहितेन शितः । धत्ते मधूकः कुसुमानि भूरि सुधूपितोप्येष विचित्रयोगः । 23 ।  
 यस्याय शाखाः सुनियम्य बद्धाः स्यूलेन दाप्ता किल कोद्रवस्य । सोत्पोपि धत्ते कुसुमानि भूरि मधूकवृक्षो भजते च वृद्धिम् । 24 ।  
 मधूकचूर्णं विनिधाय मूले क्षीराज्यमाक्षीकविमिश्रितं च । भूयोपि शित्को हि कपित्थबिल्वो मिष्टान्यनस्थीनि फलानि धत्तः । 25 ।  
 अजैडकासूकरविह्वि (?) जं (ड ?) गकृतोपचारेण च बीजपूरः । भूयोऽम्बमूत्राविलवारिसितः फलानि धत्ते सुबहूनि सम्बत् । 26 ।  
 माक्षीकयष्टीतिलमिश्रनीरसंसेविता स्यात् बदरी फलाढया । कार्पासिकामनि (बीज ?) विपक्वतोयसिका सुपुष्पा खलु पाटला स्यात् । 27 ।  
 तिलोदकेन चाज्येन मत्स्यमांसोपचारतः । शैफालीपीतिका सित्ता पुष्पितैकदिना भवेत् । 28 ? ।  
 माषमांसगुहक्षीरक्वाथसेकाद्भवति हि । नारंगविटपे स्यूलसुरमानि फलानि च । 29 ।  
 कर्कधुमेयीतिलतकरोध्रदध्यारनालांबुनिषेचनाद् । प्रियंगुपुनागकदंबवृक्षान् सुगंधिपुष्पाङ्कुरते दशाहात् । 30 ।  
 जंबाग्राशोकधारात्रीककमलख (?) लकुचां लेखयित्वाय सम्बत् जंबालक्षीरोध्रिः समधुघृततिलैर्मूलदेष्टे च विध्वा ।  
 पश्चात्संसेचयेत्तान्दशदिवसमयो क्षीद्रदुग्धांबुभिर्व तेषां पीयूषतुल्यं भवति खलु फलं वध्यतामागतानाम् । 31 ।  
 सतिलगुहविहंगं संनिधायाम् मूले मधूककुसुमचूर्णं पूरयित्वा सुमृदभिः ।  
 बहुकुसुमविकाशीं कोलमूलांबुसेकाद् भवति लकुचवृक्षो सौरभाढयो दशाहात् । 32 ।

वसन्ते चूतवृक्षस्य परश्च (?) लेखनं हितम् । मंजरीणां विकाशाय मुनिभिः परिकीर्तितम् । । 28 । ।

कदलीनां हितं भस्म त्रीहिगोमयसंभवम् । शालेस्तुषां बुक्कवितं तृणद्रूणां विशेषतः । । 29 । ।

घृताकारक्तमृत्लिप्तः सित्तो कोलाभसा पुनः । अशोक (कः ?) कृसुमादयः स्याद्यथा कांतापदाहतः । । 30 । ।

कांतामुवासवासित्तो बकुलः पुष्पितो भवेत् । तिलकश्च तदा स्नेषादशोकस्तत्पदा हतः । । 31 । ।

स्विन्नमाषा- (ज्य ?) बल्मीकु (क ?) मधुलिप्ता च पदमिनी । पंकोदभवा प्रतिदिनं फुल्लाभोजयुता भवेत् । । 32 । ।

सुगंधजलसंस्तिता निदाघे कुणपांबुना । आसन्नमेघे सुरभिदला स्यात्कैतकी भृङ्गम् । । 33 । ।

निखिला द्रुलताः सुरोपिताः सुभीघृतधूपिताः पुनः । घनगृष्टिवसांबुभिर्मृदा सुभृताश्च फलति सिंचिता । । 34 । ।

भग्नं कुभमुष्णं मूर्ध्नि दधन्नाग्रातकः सुखी । दाढिमस्तु मृतं चापं फलाय मुनयो विदुः । । 35 । ।

भिल्लाटमूलयवदुग्धविहंगमिश्रैस्तेलैर्द्रवीजमिलितैर्हि जलैः सुसेकः । मूलालवाल इह मृत्सु करीषदानं धूपोपि दोषविगमाय भवेच्च वृष्टौ । । 36 । ।

सिद्धदार्पाकदलीदलानि क्षफरीविट्कोलमार्जारयोरेतेषां समभागमाज्यसहितं चूर्णं तरुभ्यो हितम् ।

दत्तं धूपविलेपनोपचरैराज्यायनं रागद्विच्छाबापल्लववत्फलैश्च मधुरं व्यालोलपुष्पच्छदः । । 37 । ।

अयं श्लोकः सारंगधरस्य ।

विहंगमाक्षीकतिलैः प्रलेपो धूमो घृतस्यापि मृदालवाले । सेको यवक्षीरजलेस्तरूणां वृद्धिदंकरः स्यात्कुणपैः शिङ्गनाम् । । 38 । ।

उन्मत्तवातारिकमल्लिकाभिः ससिंदुवारैस्तिलमाषयुक्तैः । यवाज्यमाक्षीकपयोविमिश्रैर्धूपोभिलेपः सजलेश्च सेकः । । 39 । ।

सुंठीघृतक्षीद्रविहंगकुष्ठैर्लेप्योऽथ धूपोपि तुषैः कृमिघ्ने । सेको जलैः स्यात्कुणपांबुभिर्वा विशेषतः क्षीरतरोर्हिताय

आपूर्यमाणास्तरवः समुद्रभिर्मृलेजमृत्रैरभिसिच्यमानाः । सुधूपितास्तेन जलैर्निषिक्ताः कुर्वन्ति वृद्धिं नितरां विरोगाः । । 41 । ।

किट्येणयोर्वसाकोलक्वाथेन परिषिंचिताः । घृतमाक्षीकसिक्तेन स्फीताः स्युर्निरुजो (जा ?) द्रुमाः । । 42 । ।

सिद्धार्थः फलसंयुक्ता' सेविता गदवर्जिता' । जायते तस्मै नित्यं पत्रपुष्पफलान्विताः । । 43 । ।

सितामधुकपुष्पैश्च यष्टीकुण्डाज्ज्यमाक्षिकैः । निक्षिपेद्गुलिका मूले रचिताः सर्वभूतहाम् । । 44 । ।

इति कतिपययोगाः पोषणार्थं मतास्ते ———तेभ्य उह्यास्तयान्ये । विविधजनपदानां ये हिताः पादपानां ————— । । 45 । ।

उल्लासः सप्तमः स्पष्टो ग्रंथे स्मिन् विश्ववल्नभे । पोषणादिविधौ भव्यपूर्णतामभ्यगादयम् । । 46 । ।

इति श्रीमिश्रचक्रपाणिद्विरचिते विश्ववल्नभे पोषणविधौ सप्तम उल्लासः ।

अष्टम उल्लासः ।

अथ तरुचिकित्सा ।

तिक्तलक्षकषायेः स्फुटकदृशमलवर्णैस्तरोः । मधुराम्लस्निग्धलवणैर्वातपित्तकफा (?) प्लुमात् । । 1 । ।

नृणामिव तरूणां च वातपित्तकफाद्गदाः । संभवतीतच्छा (तीतितच्छा ?) न्त्यै वक्ष्ये लक्षणमीषधम् । । 2 । ।

जलीषधान्नसंपुष्टे जग्धे कीटादिना क्षते । शीतदग्धे ग्नदग्धे च विद्युत्पातहते तथा । । 3 । ।

वातभग्ने जरादुष्टे संमर्दननिपीडिते । नीते स्यानांतरे वापि निवासे प्राणिनां भृशम् । । 4 । ।

विप्रिते पिसबा (?) रे प्लुपचारादिपीडिते । अन्यथोषधा (?) निदाने च क्षुधिते दोषसंभवे । । 5 । ।

एभिस्तरूणां विपदः संभवति विशेषतः । तस्मात्सर्वप्रयत्नेन ज्ञात्वा विधिमुपाचरेत् । । 6 । ।

देशांतरोद्भवाः केचिल्लतावृक्षादिका इह । बापिता रोपिताः सम्बन्ध भवति यतो ध्रुवम् । । 7 । ।

तद्भूमिदोषात्कालस्य धर्मवित्या (?) सती यवा । सुशुभ्र (?) षणापरिज्ञानदेवतावरतो यवा । । 8 । ।

अथ वातादीनां लक्षणान्याहुः ।

रूक्षोत्पोद्गः कृशो दीर्घो निद्रालुः स्वल्पचेतनः । फलपुष्पाणि नो धत्तेऽयवाल्पाणि च वातलः । । 9 । ।

विपाकसोश्मैर्हि रसैः कटुतैः सस्निग्धमांसकवथितांशुभिश्च । सेको हितो वातिकपादयानामुद्धूलनं गोमयभस्मनापि । । 10 । ।

निर्गुणिकारवधपचशाखपत्रांबुतोयैरभिसेचनेन । तन्मूललेपेन तिलान्वितेन प्रयाति ज्ञातिं पवनश्च तेषाम् । । 11 । ।

आच्छादनं तैलखलिप्रदानम् मूले दुमाणामजमूत्रसेकः । कुम्भाषकच्छागपुरीषचूतत्वग्वाग्धाजलसेक इष्टः । । 12 । ।

वातात्कीर्णं (द्रोणं?) च गुणिकाग्राधयः स्फुटं मेषु वै । गोविट्भल्लातकवसालेपैः कृष्णपतो जयेत् । । 13 । ।

रास्ना(?) स्वगंधापवनारिनागकणाकषायेण कृतो हि सेकः । सवातिकद्रौ शतपुष्पिकायास्तोयेन वातं प्रबलं जयेत् । । 14 । ।

निर्गुणिकागुग्गुलुशेफसर्पिः कुबेरनेत्रासनबीजधूपः । हितो दुमाणां पवनात्मकानां मूलेजविष्टाखलिपूरणं च । । 15 । ।

अथ पैत्तिकलक्षणम् ।

पांडुपत्रः कृशः पक्षे(?) सुष्प(शुष्क?) शाखः स पैत्तिकः । आतपासहनोऽकालफलपाकी द्वयः स्मृतः । । 16 । ।

सस्निग्धशीतिर्मधुरैरसैश्च प्रयाति नाशं सहसा च पित्तम् । शीतांबुसेकैः सुरभीपयोभिर्नूनं दुमाणां ससिताविडे(?) । । 17 । ।

उक्षीरमुस्तामधुदुग्धसर्पिः कृपो(तो?) पचारः स(क्ष?) मयेच्च पित्तम् । जंबालषस(?) जालविलेपतो वा द्रूणां सितार्धप्रघृतादयधूपात् । । 18 । ।

अथ श्लेष्मद्वयलक्षणम् ।

स्निग्धच्छदस्त्वगिवशदाभपुष्पः फलीर्गतस्वादसपिच्छलैर्यः । लताशृतांगुपरिमंढलोसी चिरप्रवाली कफवान्द्रुमः सः । । 19 । ।

तिक्तोश्मरुक्षैः कटुभिः कषायैः कफो रसेर्नाशमुपैति शीघ्रम् । जलेश्च कोशमपरिवेचितेपि सुखी भवेत् श्लेष्मलपादपो वै । । 20 । ।

प्लक्षार्जुनोदुंबरिसप्तपर्णनिंबत्वचा वै विहितः कषायः । श्लेष्माश्वितानां विहितस्तरूणां तथैव बासाघनरोहितानाम् । । 21 । ।

व्याघ्रीसहचरारिष्टवासाश्चिदरोहितैः । कृतः क्वाथो हितो द्रूणां श्लेष्मिणां परिवेचने । । 22 । ।

परुद्धवा(?) मृतावासाव्याघ्रीस्रो(?) हीषनिर्मितात् । क्वाथात्स्वप्रकृतिं याति तरुः श्लेष्मजितो ध्रुवम् । । 23 । ।



लेपो व्याघ्रीरसेनापि मधुकदफलसंयुतः । घनपत्रकरो द्रूणां सप्ताहात् स्लेष्मिणां हितम् । 124 ।

अथ जलसेकाधिक्याजीर्णलक्षणम् ।

उन्निद्रता पांडुरता प्रवालहानिश्च शाखाग्रविशेषणत्वम् । जलातिसेकात्सपिपीलिकत्वं द्रूणां भवेन्मत्स्यविगंधता च । 125 ।

उल्लिखा (क्या?) त्पग्रहारेः सुपरशुजनितैस्तस्य वृक्षस्य मूलादिदान् विप्राप्य दोषात् जनितमपि रसं तत्प्रमाणानुरूपम् ।

पश्चाल्लिप्त्वा बिडंगैः समधुघृततिलैः पूरयेत्त्वालवाले मृदभिस्तं (?) दुग्धतोये सिंचिततनुरथो याति निर्दोषतां ह्रुः । 126 ।

प्लक्षार्जुनत्वक्कृमस्मप्रदानं च हितं द्रोणत्पसेचनम्-----? । 127 ।

अथ अन्नाद्यजीर्णलक्षणम् ।

खल्वन्नाजीर्णतो द्रूणां पल्लवानामसंभवः । सपिपीलिकता चापि शोषः पत्रेषु जायते । 128 ।

त्रिफलां च कुबेराक्षीं दत्त्वा मूलेनुसेचयेत् । सविडंगैर्गुदीक्षौद्रलेपस्तस्य हितस्तरोः । 129 ।

वैकंकतस्य (?) पत्रान् मूले चूर्णप्रदानतः । मध्वाज्यधूपान्सेकाच्च मुच्यतेजीर्णतस्तरुः । 130 ।

शाखाग्रशोषणं तस्य त्व- (गृध्र?) शोपि प्रजायते । वृक्षस्य पल्लवग्लानिर्बाढमौषधतो यतः । 131 ।

कर्कंधुचाखीजैश्च सुरभीदुग्धभाषितैः । औषधोत्थाव (म?) विकृतिं लेपात्संशमयेतरोः । 132 ।

उध्द्रुत्य मूलाच्च मृदं सुसिक्तां संपूरयेदन्यमृदालवालम् । मध्वाज्यदुग्धैश्च विलिप्य गाढं संसेचयेत् (तु?) क्षीरजलेस्तरुं तम् । 133 ।

सिताज्यगुग्गुलुक्तादधूपान्छाम्पति वै रुजः । चारुपल्लवत्वक्शोभा जायते तस्य शाखिनः । 134 ।

अथ कृमिदोषलक्षणम् ।

दोषैर्विता यस्य तरो प्रवालहानिश्च शाखाग्रविशेषणं स्यात् । त्वगृभ्रंशनं पत्रविवर्णता च ग्लानिभृच्च तत्र कृमीश्च विंघात् । 135 ।

कृमयो द्विविधा प्रोक्ता बाह्या अभ्यन्तरा अपि । बाह्यास्त्वगाग्रयाः कश्चित् (केचित्?) पत्रपुष्पफलाग्रयाः । 136 ।

कांठारको नाम कृमिर्मूलशाखान्तराश्रयः । तद्दोषतो तरुम्यति नाशं तत्तानुपाचरेत् । । 37 । ।

कृमयो द्वेषु भूदोषाज्जलदोषाच्च दोहदात् । भवत्यत्र प्रतीकारं वक्ष्ये शास्त्रानुसारतः । । 38 । ।

आरारवधारिष्टकरंजसप्तपर्णत्वचां जंतुरिषोऽव चूर्णः । मूत्रैर्गवां पशुमृषितैः प्रलेपात्कृमीन्जयेत् बाह्यगतान्स्तरूपाम् । । 39 । ।

विडंगसिद्धार्थकटुत्रयेण गोमूत्रभल्लातवचायुतेन । लेपेन शाखांतरगान्कृमीन्वे हरेत्सवर्णांश्चकुरते त्वचः द्रो । । 40 । ।

गोशृंगभल्लातकनिंबुमुस्तावचाविडंगातिविषाकरंजैः । ससर्जसिद्धार्थकसिद्धवारिधूपः कृमीनुद्धरति द्विमाणाम् । । 41 । ।

विडालगोमायुवराहविह्वलिः सिद्धार्थगोमूत्रयुतः प्रलेपः । कृमीन्द्विमाणां हरतेतरस्थान् बाह्यान्मीषां सघृतोपि धूपः । । 42 । ।

धूपायित क्षीरजलेऽव सितः प्रवालशाखाहरितो कृमिर्द्विः (?) । स्यान्निंबसिद्धार्थवचाविडंगहि (हि?) ग्वर्जुनत्वक्तिलदुग्धतोयैः । । 43 । ।

जयेत्कृमीनिगुदिकाफलत्वक्कुण्डांबुसेकात्सकलद्विमाणाम् । लेपाच्च दुग्धाज्यगुडैर्गुदीनां धूपादपि स्वास्मिन्निबन्धनाच्च । । 44 । ।

मध्ये द्विमाणां परिरोपितो वै पलाशशाखा (बी?) फलितो यदा स्यात् । जलोत्थरोगं जलज्जन्तुः कीटान्निवारयत्येष यथा ह्यशोकः । । 45 । ।

अथ छिन्नतरुचिकित्सा ।

सेको जलेर्मूध्नि च गोमयस्याद् (?) गोविण्मृदः पूरणमालबाले । विडंगमध्वान्यगुडैः सद्गुग्गुः प्ररोहकृच्छिन्नतरोः प्रलेपः । । 46 । ।

अंकोलतैलेन विलिप्य पूर्वं पश्चाद्विलिप्तः शलुः कृपपंकैः । छिन्नाघ्नपो दुग्धजलेन सितः प्ररोहमायात्यचिरेण सम्भवेत् । । 47 । ।

अथ शीतदग्धचिकित्सा ।

अंकोलदुग्धाज्यमधुप्रलेपान्मूले च मृदुगोमयतैलदानात् । शाखा (बी?) तिलक्षीरनिषेकलेपात्सक्तोऽनुभिः शीतहतः प्ररोहति । । 48 । ।

विडंगकुन्माषमयोविमिश्रं चूर्णं तिलानां निहितं च मूले । शीताहतद्रोर्जनयेच्च शाखा अंकोलतैलान्वितसार्ध (न्द्र?) लेपः । । 49 । ।

मूले तरोर्गोमयभस्मदारं निर्गुणिकाशोफकषायसेकः । शाखाप्ररोहं जनयत्युदीर्णं वसावराहस्य च लेपसेकात् । । 50 । ।

अथारिन्दग्धचिकित्सा ।

क्षीरांबुसिक्तो मधुनावलिप्तः कंदेन पदमस्य पयोन्वितेन । मृदालवाले परिपूरितो ह्रविर्भर्ति पत्राण्यनलेन दग्धः । । 51 । ।

कर्कधूमज्जामधुनावलिप्तः पक्वेन लिप्तः कृणपांबुसिक्तः । प्ररोहमायात्पनलेन दग्धः, क्षीगतसीलिप्ततनुश्च शाखी । । 52 । ।

अथ विद्युद्धतचिकित्सा ।

मधूकमुद्गातिलमाषचूर्णं सज्ज(स?)कुटुग्धैर्विनिषिक्तमूलं । प्ररोहयत्येव तरुश्च विद्युन्निपातदग्धोत्पचिरेण सज्जवत् । । 53 । ।

उशीरमुस्तामधुदुग्धलिप्तः सिक्तौघिपो वज्रहतः प्ररोहेत् । मिताविदारीतिलनागजिह्वा कु-(भु?)द्वतीमूनपयोबुसिक्तः । । 54 । ।

शीतोपचारैर्जलजातकंदशैवालपकैर्बहुशो विलिप्तः । दग्धप्ररोहं कुरुतेयः शाखी मिवेद्ययाभुष्यति नैव लेपः । । 55 । ।

अथ वातभग्नचिकित्सा ।

स्तम्भैरुक्तंभ्यः पूर्वं तमय रसनयाबध्य वातादिभग्नं प्लक्ष्माप्लोदुंबरत्वक्समधुघृतमितादुग्धलिप्तं च पश्चात् ।

मूले सप्लक्षमृत्स्नासुकरिषभरिते सेचयेत् क्षीरतोयैस्तस्मात्स्वस्य पलाशी धनपि(वि?)टपदला(ल?)पुष्पितः स्यात्फलादयः । । 56 । ।

अथान्यतरुपीडितचिकित्सा ।

मूले खनित्वा परिपूर्य मृदभिः क्षीरांबुसिक्तो जरठः फलादयः । स्यात्पादपो मर्दनपीडितोपि सहावदानात्(?) प्रकृतिस्थितश्च । । 57 । ।

अथ स्थानांतरणीततरुचिकित्सा ।

विडंगदुग्धांबुनिषेक इष्टो मधूकचूर्णं सतिलं च मूले । स्थानांतरस्यस्य च पादपस्य मृदगोमयाभ्यामपि पूरणं च । । 58 । ।

अथ गदादिजादि(ति?)निवासदुष्टतरुचिकित्सा ।

करीषमास्तीर्य तरोरधस्तात्प्रज्वाल्य हस्त्यादिनिवासितस्य । कृत्वालवालं परिपूर्य मृदभिर्मध्वाज्यलेपोनुपयोनिषेकः । । 59 । ।

अथ संसर्गदुष्टचिकित्सा ।

मध्यस्थितो द्वश्च निकृंतनीयः संसर्गदुष्टः सुखमाशु धत्ते । उद्धृत्य मृत्स्नां समृदानुपूर्य द्रुमिदुष्टोबुनिषेकतोपि । । 60 । ।

स्यानांतरेल्प परिरोपणीयोऽथवा समुद्धृत्य विधा- (विधाय?) गते । प्रज्वाल्य मृदभिः परिपूर्य तोयैः संरोप्य भूदृष्टतरुं च सिंचेत् ।। 61 ।।

अथ----- (?)

ऋतुधर्मविपर्यासे तरो तं समुपाचरेत् । दुग्धांबुकुण्ठपै-सेको दोहदादप्रतिक्रियाम् ।। 2 ।।

अभिज्ञैर्यत्र मंत्रादौ कार्या रक्षा तरोर्भृशम् । मंत्रयंत्रांतरैस्तत्रैर्देवताराधनेन वा ।। 62 ।।

वपेतिलान् क्षमामभिक्ष्य पार्श्वे मृदालबालं परिपूर्य तेषाम् । क्षीराज्यदुग्धैश्च विलेपनं स्यात् दुग्धार्जुनत्वक्कुमिनुत्पयोभिः ।

सेको द्रुमाणां फलपुष्पवृद्धेः ।। 64 ।। ?

अथोपचारदृष्टतरुचिकित्सा ।

दुग्धांबुसेकोप्युपचारदृष्टे तरो भवेत्पुष्पफलाभिवृद्धे । लेपस्तिलक्षीरघृतैश्च सेको गुहान्वितैरीषधदूषितेयि ।। 65 ।।

यदीषधैः ससर्गा मृदाद्यपनयेच्च तत् । आलबालं च संपूर्य मृदा भूयो विचक्षणः ।। 66 ।।

म्लानपांडुपतत्पत्रफलोत्पकसुमोघ्रिपः । कुंचत्प्रबालोऽसेकात्स्याच्छाबावृद्धिदिविर्जितः ।। 67 ।।

मध्वाज्यधूपितक्षीरयवचूर्णानुसिंचितः । हरित्पत्रस्थिरफलो दुग्धः स्यात्कुण्ठपादपि ।। 68 ।।

यद्यस्य वृद्धे पूर्वोक्तं तत्कार्यं हितमिच्छता । तिलतैलादिकं शीतकाले दद्याद्विचक्षणः ।। 69 ।।

शर्करातिलगोक्षीरेपात्सेकाच्च सांबुनः । अघ्रिपानां समस्तानां श्लोष(वः?) श्चाम्यति सर्वथा ।। 70 ।।

कृतोपचारो न यदा वृद्धिमायाति पादपः । दोषात्स्यानांतरे सोपि रोप्यो सावल्पादपः ।। 71 ।।

कट्वंगभिल्लोटबचाविडंगमिध्दार्यक- (ष्णा?) रजनीद्वयेन । समाधितं क्षीरयुतं घृतं यत्तस्योपलेपात्सुखिनोऽघ्रिपाः स्युः ।। 72 ।।

अथ ज्ञावचिकित्सा ।

ध्रुवेतसतर्कारीप्रियंग्वर्जुनवल्कलैः । पयःसिध्दैर्वि(र्वि?) लिप्तानां प्रा(प्रा?) वः श्चाम्यति ज्ञाखिनाम् ।। 72 ? ।।

तिलपत्रशतपुष्पामत्स्यधर्तृपत्रकवधितजलनिषेकात्प्रावज्ञातिस्तरूपाम्।

गुडसलिलपयोभिःसेचितानां निकामं भवति सुखमयैषां पुष्पपत्राभिवृद्धिः।।73।।

सुरभितृणविदारीपद्मकोशीरपय्यातगररजनिकुष्टप्रीद्वजंतुघ्नरोषिः। सुरतरुजलदुग्धिःप्रस्यमात्रं विपाच्यं भवति च तिलतैले रोगनुत्पादपानाम्।।74।।

विहंगरोप्रसमिप्रसितादुग्धाबुसेवनम्। शीतकाले हितं सम्बत् लताविटपिनां सदा।।75।।

आलवाले च मृद्वानं तिलदुग्धाबुसेवनम्। शीतकाले लतानां वै विटपानां विशेषतः।।76।।

जलसेकःसदा श्रेष्ठो लताविटपिनां भवेत्। क्रिया यथोचिताः कार्यास्तत्रसर्वथ साधिनाम्।।77।।

शास्त्रेषु योगा बहवो निरुक्ता इहानुभूता लिखिताः कियंतः। चिकित्सितं तत्कुशलैर्विधेयं विचार्य बुद्ध्या विहितं द्रुमेषु।।78।।

ग्रंथेस्मिन् चक्रपाणेश्च पूर्णतामष्टमो गमत्। चिकित्सिते द्रुमाणां तदुल्लासो विम्बवल्लभे।।79।।

इति मिश्रचक्रपाणिविरचिते विम्बवल्लभे अष्टम उल्लासः समाप्तः।

नवम उल्लासः।

कुमुदफलविपक्वं बीजमादाय शुष्कं मृदितमथ करीषे माहिषस्यापि भूत्रे।

दिनमति-(?)यावच्छुद्धभूमी तदुप्तं जनयति करवीरं कौतुकं स्याच्च लोके।।1।।

पक्वे मीनपलाबुनीह निहितं बीजं सधूकाग्रजं यावत्सप्तदिनं ततो रविकरेरुद्धृत्य संशोषयेत्।

दुग्धाज्ये य पुनर्निधाय विधिवच्चान्कोलतैलान्वितेऽप्युप्तं तद् बृहतीं तनोति जनताचित्रकरं स्यादिह।।2।।

एरंडबीजं च बराहरक्तवसाभिषिक्तं परिभाषितं सत्। अंकोलतैलेन दिनं तदुप्तं सूतेय कारल्ल-(ल?)तां विचित्रम्।।3।।

कोलमीनवसामांसवनकक्षारभावितम्। बीजमा-(त्रं?)क्ष(छि?)ताबुप्तमारोहति फलत्पयि।।4।।

दालाघ्रिपेयो सुखिरं विधाय यस्यैव बीजः परिपूरितं तत्। संलेपितं वत्सविसा(वा?) प्रवृद्धदेतस्मिन्तदाकारफलं भवेद् वै।। 15।।

कृष्मांडवार्ताकपटोलकादि बीजं बराहस्य वसा विभाव्य। उप्तं सुसिक्तं च फलानि भूरि बृहन्त्यनस्यीनि दधाति चित्रम्।। 16।।

मध्वाज्यालुलितं विशोष्य किरणैः सूर्य(र्य?)स्य वार्ताकजं बीजं वल्गियुते विधाय सुखिरं कृष्मांडके कोमले।

क्षिप्त्वा गो—(?)विलिप्य सह(ह?)सा पक्वे समुद्धृत्य तच्चोप्तं स्वे समये फलं वितनुते कृष्मांडतुल्यं महत्।। 17।।

अंकोलतैलेन बराहनकवसानुलिप्तं जलु बीजमात्रं। उप्तं च भूमी करकांबुसिक्तं सद्यःप्ररोहं कुरुते (अ)तिचित्रम्।। 18।।

आम्रस्य बीजं शशकूर्मरक्ते त्रिसप्तवारं परिभाषितं यद्। दुग्धांबुसिक्तं तरुतां प्रपन्नं फलं विधत्ते जलु सर्वकाले।। 19।।

अंकोलतैलेन नृरक्तभिन्नं बीजं करे रोहति मृतसुपूर्णे। सिक्तांबुना रोहति तत् क्षणेन चित्रं हि लोके वितनोति भूरि।। 10।।

अंकोलतैले परिभाव्य कंदं तं कौमुदं गोमयभाषितं च। स्थितं घटे वै करकांबुपकतोयैः सुपूर्णे कुसुमं प्रसृते।। 11।।

करीषकोलास्थिविदग्धगर्ते पूर्णे भूषां बालुक्या नु तत्र। उप्तं सुसिक्तं जलु मूलकं स्यात्स्यूषासमं चित्रकरं च लोके।। 12।।

अथ वृद्धचित्रीकरणम्।

शकुटिद्विगोक्षुरसेन सिक्तो य आलवाले खलिमिश्रितेन। द्रुमः सदा पुष्पफलानि धत्ते मनोहरं लोकविलोचनस्य।। 13।।

इहेष्टिकाभिः पुरुषप्रमाणे चितेऽवटी यो वितपस्च जातः। स वामनः पुष्पफलो(ले?)विधत्ते सदैव लोके वितनोति चित्रम्।। 14।।

मूले सदांकोलबराहरक्तमेदोवसासंबन्धितेन सिक्ता। मिष्टान्ययाग्रस्य फलैः समानि फलानि सूते कदलीति चित्रम्।। 15।।

विडंगयष्टीमधुकोशमदुर्ध्ववस्य चूर्णेन गुडेन युक्तैः। लिप्तो विलिख्यांबुपयोनिषिक्तस्त्य(स्ति?)कोघ्रिपः(?) स्यान्मधुरः स्वभावात्।। 16।।

विडंगयष्टीमधुबर्कांबुधूरिनिषिक्तोऽम्लफलः स्वभावात्। धत्ते स्वकंदे वितपोपि सम्बत्स्यूषालानि मिष्टानि फलानि चित्रम्।। 17।।

बराकाही(बाराही?)घृतकृचिकाकमिहराराजीघृतामत्रके संस्थाप्येक्षुरसैदिनतियिमीती तेन द्रुमूलं ततः।

आलिप्याय मृदा सुपूर्वं बहुशः संधूपितः सेचितस्वेक्षुषां च रसेरकालकुसुमं धत्ते फलान्यघ्रिपः।। 18।।

बालाधिपं यानि विदार्य तत्र क्षिपेच्च बीजानि विलेपयेत्तम् । गोवत्सविह्विस्तृणः स धत्ते तादृक् फलानीह विचित्रमेतत् । । 19 । ।

धिन्नस्कोधोप्यतरुणतरुर्वह्निना मंददग्धो लिप्तो भूयः कृण्वलवणक्षौद्रसर्पिःपयोभिः ।

दुग्धाभौभिः सुपरिषिचितो लोहविध्दा (ध्द?) च मूले धत्ते काले सुकुसुमफले वामनचित्रमेतत् । । 20 । ।

विलिख्य मध्वाज्यविहंगदुग्धैर्लिप्तानुगाढं त (तृ?) णचर्मबध्दा । दुग्धांबुसेकाद्विटपस्य शाखा धत्ते चिरं पक्वफलं विचित्रम् । । 21 । ।

द्वमस्य फलिता शाखा विलेख्यार्द्रेण चर्मणा । बध्दा पक्वफलं धत्ते चिरं चतुरचित्रकृत् । । 22 । ।

न सेचनीया विटपाः कुलन्त्यक्वाथांबुना तत्फलपुष्पनाशम् । करोति तद्वल्लवणार्जुनत्वक्कारिकाकिंशुकतोयसेकः । । 23 । ।

चिचिनीबदरपार्यफलानां क्वायसेविततरुः फलपाकम् । निंबुकांबुष्टतलिप्तफलो वै याति नैव चिरमत्र विचित्रम् । । 24 । ।

कसार्वधी पार्यफलाल्पकोलतपोधनैरंडसिराम्लिकानाम् । कषायसेकात्सकलद्वभाणां करोति सम्बत्फलपाकहानिम् । । 25 । ।

सद्योहतस्य च्छागस्य द्वमस्कोधं च (धस्य?) चर्मणा । सुबध्दायां च शाखायां फलपाको न जायते । । 26 । ।

अथ पुष्पचित्रम् ।

उप्तं समुत्पाद्य हयारिकांडवारत्रयं मृद्युतमालवाले । सिक्तं घनोक्षीरजलांबुभिस्तत्सुगांधिचित्रं सुमनः प्रसूते । । 27 । ।

विदारिकदेक्षुरसेन लिप्तौ मूले द्वमचेक्षुरसेन सिक्तः । कृतालवालः कुसुमानि भूयि सदा विधत्ते कुतुकं च लोके । । 28 । ।

समस्तुवजो (वो?) पलतोसिक्तः (?) सुधूपितः कुंदरुधूपकेन । पीतानि तुल्यानि च चंपकस्य श्रुतः पलाशः कुसुमानि धत्ते । । 29 । ।

निष्काकिंशुकककर्पासीरोध्नतोयैः सुसिंचितः । विधत्ते कनकत्वक् द्वः सुवर्णार्धं कु (?) सुमं सितम् । । 30 । ।

मलिष्ठाहिगुलुक्षीरकपोतासृक्विमर्दिता । सीराब्दरीमुत्सितं पुष्पं सुवर्णार्धं करोति च । । 31 । ।

धवखदिरकपालीकुष्टसीरस्यबस्तुक्वथितजलनिषेकैर्लेपने च अपि शाखी ।

कुसुमसुरभिर्मृत्स्ना मूलसंक्षेपणादै विगतसुरभिपुष्पः स्यात्सुगंध (धा) द्यपुष्पः । । 32 । ।

प्लानबत्वक्तगरांशुकुष्टमांसीघनोशीरकषायसिक्ताः । सुगंधपुष्पाश्च भवति सर्वा सयुधिकाः कंदजयादिकाश्च । । 33 । ।  
 लताविटपयोर्मूले मृदु भस्म निधाय च । सिते दुग्धानुभिः पुष्पफट्टि (?) स्तत्र सदा भवेत् । । 34 । ।  
 नखांनुतगरोशीरत्वक्पथजलसेविताः । चित्रसीरभ्यपुष्पाः स्युर्जा (जा ?) तीनेमालिमल्लिकाः । । 35 । ।  
 प्लाजटोशीरघनांशुकुष्टत्वक्पत्रिकाचक्रहनुजटीनाम् । चूर्णं च दत्वाय तदनुसिक्ताः सुगंधपुष्पा विटपा लताः स्युः । । 36 । ।  
 मंदाररंघ्रिचिनिर्गताया (?) कृष्णाढवल्ली जल मूलभागे । संपुरिता गोमयमृत्तिकाभिः सिक्ता सदा स्थूलफलानि धत्ते । । 37 । ।  
 निधाय मूले मृदुभश्म (स्म ?) पूर्वं मृदुगोमयाभ्यां परिपूर्य पश्चात् । या (जा ?) ती विधत्ते कृष्णानुसिक्ता वसंतकाले कुसुमान्यपीह । । 38 । ।  
 चूर्णं यवानां तिलपिष्टमिश्रं क्षिप्त्वाय (मृ ?) दधि -- (?) तु धृतेपि मूले । उर्ध्वं प्रवृद्धा विटपैश्च तुल्या भवति बल्यो जलद्रुग्धसिक्ताः । । 39 । ।  
 अय मतांतरे फलचिव्रीकरणम् ।  
 मधुकपुष्पैर्मधुयष्टिकुष्टसिताघृतक्षौद्रयुतैश्च पिष्टैः । आज्ञाघते यदिटपस्य मूलं फलं च तस्यास्थिविवर्जितं स्यात् । । 40 । ।  
 गुंजामधुदुग्धरश्कराज्यमधुकपुष्पाणि विकीर्य कांढम् । अंतर्निधायोपरि वत्सविट्पिलिप्ते तरी स्यात्फलमस्थिवर्ज्यम् । । 41 । ।  
 जीवंतिकापत्रमनःशिलालं मजिष्टिकादारुनिश्चायवैश्च । गोजाविदुग्धैः सतिलैर्विलिप्त्वा कार्पा (स ?) कि स्याच्च खनीलतूला । । 42 । ।  
 कार्पासिकायवनिश्चापलाञ्छतिलपुरिता । मूले तदनुसिक्ता रक्ततूलफला भवेत् । । 43 । ।  
 त्रिफलाशाल्मलीत्वग्भिः सनिश्चाकुष्टसीधुभिः । लेपात्सेकाच्च कार्पासी हरितुलफला भवेत् । । 44 । ।  
 कासीसनीलीतिलताम्रयष्टीवचानिश्चायुग्मसुचूर्णलेपात् । तदनुसिक्ता जल पीततूला कार्पासिकीस्यात्कुक्षुलः (?) क । । 45 । ।  
 चूर्णं यवानां परिलोढय चेशुरसेन सिक्ताज्यविड्गाधूपैः । सुधूपिता सा परिपाककाले द्राक्षा भवेन्मिष्टफला हि सन्वत् । । 46 । ।  
 पूर्वोक्तयोगिद्वयस्य नूनं स्वभावतोम्ना अपि सेकलेपात् । समस्तबल्लीविटपाश्च रम्यसुमिष्टमेदस्विफला भवति । । 47 । ।  
 कस्तूरिकागंधरजः सुगंधतोयेन समिक्ततलः सुपक्वः । तत्तुल्यसीरभ्यरसस्तयेधुकांडो भवेन्मिष्टतरो हि नूनम् । । 48 । ।



जले लोशीर(?)मुस्तांबुसिक्तम्ब दिनविंशकम्। तथा सीरम्भसंवाही भवेदीधुरसो हि वै।। 49।।

विचित्रकरणे योगाः कियंतो लिखितो(ता?)मया। इ(द्र?)ष्टव्याम्बतुरिरन्ये शास्त्रलोकानुसारतः।। 51?।।

विदग्धहृदयाङ्गादिग्रंथेस्मिन् विम्बबल्लभे। चित्रीकरणसुलोमुल्लासे(समुल्लासे?) उल्लासो(?) नबमोभ्यगात्।। 52।।

इति श्रीमिन्नचक्रपाणिविरचिते चित्रीकरणनबमोध्यायः।

।। संवत् 1925 श्राके 1790 फाल्गुनकृष्ण(?)नबम्यां लिखितं लक्ष्मीनारायणेन भक्तावरस्य पठनार्थम्।। श्रीरस्तु।।



# रिंशेववल्लभा

(Translation)



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# Vishvavallabha

## Chapter I : Groundwater

### A. Groundwater

1 Having saluted the lotus like feet of Shri Raghavendra as also those of my preceptor, I shall expound the everlasting knowledge on water and also the technique of planting, etc., of trees, depending on it.

2. How much water is available underneath the ground? What are the indicative signs to find it and at what depth (literally, at how many hand-lengths\*) is it available? In which direction do the currents flow? Is there an obstruction of a rock, etc..? Is the water sweet or otherwise? Is there sand underneath? -This and all that which is conducive to the welfare of mankind, I shall now narrate after consulting the sciences, which impart everlasting knowledge.

[\*A hand-length is considered equal to one and a half feet or 45cm approximately.]

3. A wise man should explain all this, after first ascertaining the type of land, which is ordinary, wet, dry, or mountainous, since indications depend on the type of land.

4. Although scholars of proven wisdom have affirmed that groundwater is available close to the surface in wetland, and that it is found at a considerable depth in

the drylands, deserts, and mountainous regions full of gravel, I shall narrate (the availability of groundwater), with regard to the ordinary and mountainous regions, according to the technique as explained only in the ancient science, on account of the persistent requests made by the king.

[The text appears to be corrupt at some places.]

5. There are eight currents of water under the earth running towards the (four) main and (four) intermediary directions and there is the ninth forceful current (at the center) proceeding upward. These are the main water currents and are stated to be fruitful for acquiring (a constant flow of) water.

6 Sometimes a stream proceeds from a mountain or from the root of a tree downwards to a brook while sometimes all the streams are seen readily visible in the valley.

7 If the earth is too hard to dig, almost like a rock, and if the axe hits on a *parpata* stone\*, there is plenty of water underneath.

[\**Parpata* is a name of several plants according to Bhavaprakasha. But that meaning does not suit the context. One of the varieties of *parpata* tree, *Glossocordia*

*bosvellea* (L.f) DC., grows on rock. It is possible to translate the word *parpatashma* as 'a rock on which *parpata* grows'. *Parpata* also means food preparation called '*papad*' in Hindi and many other Indian vernaculars. It is a thin *roti*, prepared mainly from blackgram flour, and is dried and stored. When fried or roasted, it is eaten with rice as a thin, crispy snack. Perhaps the stone is so called because it is also made of thin flakes (?). While describing the same indications of groundwater, Varahamihira (54-6) mentions *putabhedaka pashana* in place of *parpatashma*, which means 'rock, cleft asunder'. The meaning, a flake stone or a cleft rock, which suits the context better, depends on the type of stone that is likely to be an indication of water current underneath.]

### The lucky combinations in a dry region

8. When a *cane* cluster is noticed growing on the surface in the absence of any water body (in the vicinity), a current runs underneath at a distance of three hands (cubits) to its west. After digging the ground for seven hands, at a distance of two and a half hands a gold-colored stone, followed by a *parpata* rock, and then the water are found.

9. Where (on dryland) there is a tree of dark *udumbarika* (without any source of water in the vicinity) a current of water runs underneath, at a distance of three hands to its west at the depth of two and half man-heights. At the depth of a man-height there is white sand. To the east (of the tree) too, a current runs at the depth of two

man-heights. The earth there, is of the color of iron or is white. Further at the depth of (?) \* man-height a frog is sighted.

[\* A word is incompletely scribed here. A man-height is stated to be the measure of a man of normal height (6 ft) standing with his hands raised upward.]

There are two sets of combinations here:

10. If to the north of an *arguna* tree an anthill is spotted at a distance of three hands to the west of that tree, there certainly exists a source of limited water at the depth of three and a half man-heights. If at the depth of half a man-height an alligator of whitish dusty color is sighted and close to the water there is white sand first and then yellow sand, the water there is very sweet (tasty).

11. To the south of the anthill near a *jambu* tree there is a possible source of sweet water at the depth of two and a half man-heights, where the rock is of the color of a pigeon. If there is a *badari* tree to the west of the anthill, source of water at the depth of three man-heights to the west of the anthill should be foretold and an alligator at a distance of two hands would be the indication.

Two sets of combination in this regard:

12. If there is a *sinduvara* tree near an anthill, water exists to its south at the depth of one and a half man-height. The earth is brown, sandy, and white sequentially. If there is a combination of a *kola* and a *palasha* tree, water exists at the depth of three and a half man-heights

under the ground at a distance of three hands to the west, and the sand there is whitish red.

Two combinations here:

13. If *bilva* and *udumbarika* are found in combination (near an anthill), water exists at the depth of three and a half man-heights to its south at a distance of three hands, and a frog is an indication. If, however, *kakodumbarika* is close to an anthill, water exists at the depth of three man-heights to its west and at the depth of half a man-height, the rock is white and so is the soil.

Two combinations here:

14. A feeble current of water is stated to exist underneath, to the east of a *kampilla\** tree (spotted in a place without water source) at a distance of three hands. The earth is salty and of the color of iron. A similar (thin) current of water exists to the north of a *shona* tree. If there is an anthill to the south of *kali* tree, water would exist to its west at the depth of a man-height. If the tree is to its west, water currents could be traced at the depth of four and a half man-heights.

[\*The corrupt script is deciphered with the help of the text of *Bṛhat Samhita*, 54.21.]

Three (two ?) combinations here:

15. If there is an anthill to the south of a *karanja* tree there would be two currents of water running underneath at the depth of three and a half man-heights in that (southern) direction at a distance of two hands. At the

depth of half a man-height a tortoise is sighted before the currents. If that (anthill) were positioned to the north of a *madhuka* tree, water would be found to its north and west (at the same depth). At the depth of half a man-height a snake is sighted. The earth there is of a smoky color and rock is reddish.

Two combinations here:

16. If to the south of a *kapirtha* tree, there is an anthill, and if a frog is sighted under the tree, water can be found at the depth of four man-heights at a distance of seven hands to the east or north. If at the depth of a man-height a spotted snake is sighted and below the spot there is black earth and a *putaka* rock, a pair of water-streams proceeding to the north would then be found.

17. If to the north of an anthill a *tilaka* tree is spotted with smooth *durva* and *kusha* grass growing around, a current leading to the east would be traced to its west at a distance of five hands. If there was a tree of *nalikera* or *tala* in association with an anthill there would be a current of very sweet water at the depth of four man-heights at a distance of six hands to the west.

Two combinations here:

18. If a *badari* tree or an anthill is found positioned to the left of *ashmantaka* tree, there is water to its east at a distance of six hands at the depth of three and a half man-heights if proper indications are seen. At the depth of a man-height a tortoise and a rock of a dusty color are the indications. The current of water running towards



the south is found first. Below that is another current proceeding to the north. The latter one is a perennial source of water.

19. If a *haridra* tree has to its left an abode of a serpent\* (anthill), water would be found to its east at a distance of three hands at the depth of five man-heights. At the depth of a man-height, an extremely white serpent, yellow soil, and black soil are the sequential indications and beneath that (at the depth indicated) a current flows to the west which is found first. Another current flowing to the south is traced thereafter. Wherever herbs, water or trees, grass, and creepers are found, water current runs very close to the surface.

[\*The Sanskrit word *phali* is corrected to *phani* on the authority of Brihat Samhita, 54-45.]

Two combinations here:

20. The region in which *bharngi*, *danti*, *rudanti*, *trivrit*, *asitadala* (having black leaves), *lakshmana*, *malika* (*nava*) grow, water exists to their south at the depth of three man-heights. The region where a single branch of a tree bends low and the leaves of other trees are glossy, water exists beneath that branch and quantity of water is proportionate to it. Water also exists where the trees are glossy, dwarfish or excessively broad (spread out) and where the branches are hanging low.

Two (three ?) combinations here:

21. If the ground makes deep rumbling sound when struck with feet, water exists underneath at the depth of three

man-heights. If a *kharjuri* tree is bent at the top, water exists to its west at the depth of three man-heights. If a *palasha*, *karnikara*, or *kola* has white flowers, to its right at the distance of two hands there exists water underneath (So good that it is rare to be found even in the Gods' abode but it would not last beyond three years).

Two combinations here:

22. If hot vapors or smoke rises from the ground at the depth of two man-heights, water exists under the surface. If crop (sown on a piece of land) turns white and perishes, water is traced under the ground at the depth of two man-heights. \* Preceptors have stated several such combinations but I have explained only a few of them pertaining to dryland bereft of (surface) water, for fear of unnecessarily increasing the volume of the work.

[\*The script being unintelligible this line is interpreted with the help of Brihat Samhita, 54.61 having a similar content.]

Thus ends the section on dryland.

## **B. Here commences the section on deserts**

1. Hereunder surface indications for groundwater, whether sweet or containing safe proportion of salts on the land of Marwar (alternately any desert land) are being described as are in agreement with the great sages, so that the people of the region can experience lasting happiness. Generally in such a region, there would be

several currents of groundwater equal in thickness with an elephant's trunk.

2. When an anthill is found to the north of a *karira* tree, sweet water is indicated to the south (of the tree) at the depth of ten man-heights. A yellow frog at the depth of a man-height is a further indication. If an anthill is situated to the west of a *rohita* tree, salt water exists at the depth of twelve man-heights at a distance of three hands and there are many currents on the west.

Two combinations.

3. Close to a white anthill on the west, water current exists at the depth of five man-heights. An earthworm on the north, and yellow soil on digging up to a man height are further indications. An anthill to the east of a *pilu* tree indicates excessively salty water to the south at the depth of one to seven man-heights. On digging to the depth of a man-height, a black and white snake, one hand in length, is observed.

[Corrupt text is read with the help of Brihat Samhita (54-65, 66).]

Two combinations:

4. An anthill to the east of *indra* tree indicates water just at the distance of a hand to its west at the depth of twenty man-heights. At the depth of a man-height an alligator is sighted. A combination of *kantakarī* plant with a tree without leaves, indicates water at a distance of three hands to the west at the depth of thirty-six man heights, if the current is strong, leading to the northeast.

Two combinations:

5. A combination of *rohita*, *badara*, and *pilu* trees indicates water at a distance of three hands at the depth of sixteen man-heights. A scorpion at the depth of half a man-height, white soil, are further indications.

[The verse is incomplete.]

6. A *karkandhu* tree combined with a *pilu* tree indicates existence of very salty water three hands to the east at the depth of twenty man-heights. A *bilva* or a *karira* tree in combination with a *kakubha* tree indicates very sweet water at a distance of two hands at the depth of twenty-five man-heights.

Two combinations

7. Five anthills at one place with the middle one being white indicates a source of water at the depth of fifty five man-heights. An anthill with *kusha* or white *darva* growing on the top indicates water underneath at the depth of twenty-one man-heights.

Two combinations:

8. A *rohita* tree surrounded by other trees at the center of three anthills suggests existence of water at the depth of sixty man-heights. Yellow soil is a further indication. A *palasha* tree in combination with a *shami* tree indicates a source of water to the west underneath, at the depth of sixty man-heights (Yellow soil mixed with sand at the depth of half a man-height is a further indication).

[The verse is incomplete and the text is corrupt. It is interpreted and completed with the help of Brihat Samhita, 54-83 having the same content].

Two combinations:

9. A *rohita* tree surrounded with anthills indicates a source of very clear and sweet water, seventy man-heights deep to the east. A *namba* tree with glossy leaves exuding sap suggests existence of plenty of clean and fragrant water all around at the depth of forty man-heights.

Two combinations:

10. Ancient scholars have stated that a *shama* tree, full of knots growing to the south of an anthill indicates source of sweet water, fifty man-heights deep to the west. If it (*shama*) has white thorns, water source is indicated at eighty man-heights depth to the south. A snake at the depth of half a man-height is a further indication. If it is a combination of *neepa* tree and anthill, water is found at the depth of twenty-five man-heights.

Two combinations:

11. On excessively smooth land surface, water is indicated at the depth of twenty-five man-heights if the soil at the depth of three man-heights is black or pale white. To the left side of a *mahanimba* tree with thick growth of smooth leaves, water is available at the depth of seventy man-heights. Birds on the tree there sing sweetly.

12. Plants and herbs with dark green leaves or trees like *neepa* and *shimpa* are indicative of groundwater at the

depth of fifteen man-heights. Existence of a cobra is a further indication.

Thus I have stated here a few indicative marks found on the land of Marwar (or desert). Sharp-witted men can always learn about additional indications from other people or from other treatises.

Thus ends the section on Marwar region (or any region destitute of water)

### C. Surface indications of groundwater on wetland

1. The wetland is strewn with water-growing herbs, plants, and creepers all bearing green leaves and full of *virana* grass . . . \* and beset with mosquitoes. It has plenty of sweet water lying at the depth of a man-height. If the land is at a low level, water is indicated at the depth of three hands.

[\*Part of the text is corrupt.]

2. Water is indicated very close under the ground on which grow *danti*, *rudanti*, *trivrita*, *shiva*, *shyama*, *mashuparni*, *garuda*, *ashuvega*, *jyotishmati*, *vyaghrapadi*, and *varahi*.

3. Water is also close under the ground where *mashacchada*, *gundraka*, *kokilasya*, *lakshmana*, *alindala*, *edukivya* (?), *brahmi*, *pindaraka*, *sharivakha*, and *nala* grass grow.

4. Plenty of groundwater would also be available, just at the depth of four hands to the south of a piece of land where several glossy trees and creepers grow. Low-lying areas of valley covered with green grass, where the surface soil is sandy and the ground reverberates with the sound of stepping too, are rich water resources.

5. Wetlands always have a guaranteed source of sufficient water close to the surface. As a result there are several surface indications too. Only a few of them are described here, overlooking the others.

Thus ends the section on surface indications in wetlands.

#### **D. Ordinary land/mountain land**

1. Water is said to be available everywhere on ordinary land at the depth of less than ten hands. Depending on surface indications the quantity is excessive, plenty etc.

2. It is certain that all the three types of land (dry, wet and ordinary) exist in the mountain regions. An expert should explain the indications only after taking into account the type of land in a particular region.

#### **E. Indications of groundwater in mountains**

1. Several surface indications of groundwater have been clearly described in literature. I have thoughtfully chosen here some of them. I state here those combinations with regard to mountain regions, which are described by Varahamihira and others.

2. A combination of *bodhi*, *udumbarika*, *palasha*, and *nyagrodha*, on dryland indicates plenty of water underneath them at the depth of three man-heights.

3. Trees, bushes, and creepers with a milky sap and glossy leaves without holes, and whereon birds of different sounds nest, indicate existence of sweet water close to the surface.

4. Water is indicated at the depth of three man-heights where *kharjuri*, *jambu*, *shatapatri*, *neepa*, *sinduvata*, *vata*, *naktamala*, *audumbari*, *kakaudumbari* and *bibhitaka* grow

5. Water is also indicated at a place where flower-bearing trees and creepers like *jati*, etc., or *kubjaka*, *champak*, etc., grow and also at a place where *dadimi*, *nimbaka*, and *bijapura* bear fruits.

6. Water is also found in plenty where *tala*, *nalikera*, *kanchanara*, *vetasa* or any other tree with glossy leaves, grows on the top of a mountain.

7. A spring which has been referred to previously can also be found in a mountain region emerging either from a juncture of rocks or from the foot of a tree. It flows just by divine power and there is no measure for its quantity.

8. In the wetlands of mountain region, powerful water currents sometimes rising upward are traced under the

surface at holy places, in front of temples and other places.

### **Rocks as surface indications of groundwater**

9. A rock facing eastward and having the color of *udumbara* or *anyana*, lustrous like lapis lazuli or white like a pearl, smoky like a straw or brown in color, indicates plenty of water nearby.

10. Rocks similar in color to a white silk cloth, clarified butter, pigeon, moon, or a high-rising rock indicates water, which can be reached in a moment.

### **Soil as surface indication**

11. Sweet water is indicated under a piece of land which has sandy blue soil or sandy black soil or sandy soil in the color of wheat or of yellow color.

12. Small quantity of astringent water is indicated under the land having sandy soil of copper color. Water similar in taste to salt is indicated under land with pale white sand . . . \*

[\*Last line is missing.]

### **Vegetation as surface indication**

13 Absence of groundwater is indicated where the trees, bushes, creepers growing on the surface are thin, rough

and have leaves with small holes\* and also where *shriparni*, *sarja*, *arjuna*, *shaka*, *bilva*, *shimshapa*, *partha*, and *dhava* exist.

[\*The text is corrupt.]

14 Whatever measure of depth (as for example three or four man-heights, etc.,) regarding the availability of groundwater stated here, resulting from the combination of *durva*, *jambu*, *kusha*, *pichu*, *mahanumba*, *pilu*, *pavasa*, (*palasha*?), *kadamba*, *kutaja*, etc., in dryland (on plains), is reduced by a quarter in the drylands of mountain region, and by half in the wetland of mountain region. Sages have stated the same measure in hands, whether in wetlands or in plains.

[The text involves some difficulty in interpretation due to many factors like corruption, involved construction, ambiguity of expression, etc. Availability of groundwater in dryland on plains is taken here as the standard of comparison and water availability in other places is correlated to it, surface indications remaining the same. Thus for example, if combination of *jambu* and *durva* on dryland on plains indicates availability of groundwater, four man-heights below surface, the same combination on the dryland of mountain region would indicate water availability at the depth of three man-heights (one quarter less) and at the depth of two man-heights (reduced by half) on wetland of mountain region. The same combination in wetland on the plains would indicate availability of water at four hands (measure of man-height becoming measure of hands) below surface. See comparative chart below.]

### Groundwater availability

Combination	Land on level surface	Depth of water	Land on mountain	Depth of water
<i>Bilva</i> and <i>udumbara</i>	Dry	3 man-heights	Dry	2+1/4 man-heights
	Wet	3 hands	Wet	1+1/2 man-heights

15. Wise men should first assess a region and group it (as per the availability of water) under one of the four categories, viz , meager, medium, plenty, and dry. Afterwards, measure of available water should be guessed accordingly (depth, etc.,) Indicative marks like *durva*, etc., as have been explained by ancient sages should be stated similarly on that category of land, only difference being in the measure (depth) of water available.

16. I have explained above the method of discerning groundwater from surface indications after the sage (Varahamihira). Having described the same, this chapter ends here.

Here ends the first *Ullasa* of Vishvavallabha dealing with groundwater, composed by Shri Mishra Chakrapani.

## Chapter II : Water reservoirs

### Construction of water reservoirs

1. After finding out the groundwater source, reservoirs should be constructed there in the villages. They are of various shapes and sizes. It will be in place therefore,

to describe now their right location, measurements and so on

2 Great sages have stated that pools, ponds, wells, and potholes when naturally formed do not have any fixed proportion. Periodical springs, canals, and water basins, etc., can be of any shape and size as desired.

3. Lakes are constructed in six\* different shapes, viz., circular, quadrangular, triangular, multi-angular, long like a staff, or semicircular resembling the shape of half moon One must know the measure of their depth.

[\*Literally refers to 'number of tastes', which are sweet, sour, saline, bitter, pungent, and astringent.]

4. Some people give them names like large, circular, semicircular, auspicious, quadrangular, and immensely auspicious. But these people have obviously not comprehended the import of the treatise.

5. Three of these differ mutually due to the shape; one differs on account of its measure (depth) and the remaining two are distinguished on account of the difference in their method of construction. And the possibility of one

stemming from the other cannot be denied. Like water pots they possess mixed characteristics.

6. A lake is stated to be superior when measuring a thousand *dandas* (18 km) (1 *danda* = 4 *hastas*, 1 *hasta* = one forearm = approx 18in or 45cm) in length. It is mediocre when the length is half of that and inferior when the length is half of that of the mediocre one. Depending on the room available, they are indeed big or small.

7. If a dam is constructed between two hillocks or if an extensive land lies in front of a mound, a huge lake, a tank or reservoir always having plenty of water can be constructed in the basin at a low cost. (?)

8. When the land ahead is broad and rises gradually on all sides to a higher level, the input of water is ample. The land where water is let out can have a huge lake even with a small quantity of water if a dam is constructed. (?)

9. An expert should construct steps from the ground reaching up to the surface of the dam. To strengthen the dam, it should be secured with deep reaching layers of plaster of mortar.

10. When a low-lying piece of land is surrounded by watery land, a lake is automatically formed. There is no standard measurement for it. Even small lakes like . . . (?)\* etc., are without any fixed measurements.

[\*The text is corrupt and unintelligible.]

11. Pleasure resorts of kings are often built in the midst of a lake or on its bank. A boat should be kept ready there for facilitating water sports. A way to approach the resorts or bridges must be provided.

12. There are four types of ponds. *Nanda* has three projections and one entrance, *Bhadra* has six projections and two entrances, *Jaya* has three openings and eleven prominences, while *Vijaya* with twelve prominences is stated to be equipped with four openings. (?)

13. From a point equidistant from its two extremes and measuring twice or alternately half the length between them with a projection at the middle, a canal equipped with a spacious stairway, should be drawn. It should be equipped with an arched doorway and a banner. (?)

14. Wells are of seven types: *Vijaya* with two openings, *Dundubhi*, which is striking in appearance, *Chudamani*, *Bhadra*, *Jaya*, *Nanda*, and *Shankar*.

15. The diameter of the first (*Vijaya*) is four *karas* (approximately 10ft) (where *kara* is a measure equal to the breadth of twenty-four thumbs) and that of each succeeding one increases with one (*kara*). Holes, small wells, rivulets, and basins do not have any standard measurements.

16. If a well has sand at the bottom, it should be covered with a good quality timber or . . . \* in such a manner as the flow of water current underneath is not obstructed.

[\*Text is unintelligible.]

17. If in a village, a well is the main source of water . .  
\* and if it is situated in an inauspicious direction, it becomes a cause of fire and eventually causes death of frightened children and ladies.

[\*The text is defective.]

18. A village where water current underneath does not exist even within the limit of thousand *dandas* (where a *danda* is a measure of length equal to four *hastas*) in directions stated to be auspicious for constructing wells, a well situated in an inauspicious quarter too, does not lead to misfortune. It may be used for watering trees, etc., without any harm.

19. *Bhadra*, *Subhadra*, *Parigha*, and *Nanda* are the four types of potholes (hollows receiving water from spring). The first one is quadrangular . . \*

[\*The text is defective and not intelligible.]

20 Those that are minimum four *karas* and maximum hundred *hastas* in measures, have access on four sides and can be situated in all the four quarters. They should be planned in the center of the open quadrangles of mansions and should be equipped with small windows at the corner.

21. They are naturally formed and have unfathomable depth. The same when dug with human effort can have various shapes. In whichever form they exist, they should be strengthened with stones and mortar.

22. While digging ponds, etc , if one runs into a rock, it is necessary to find out whether it is hard or soft. Sages have stated certain colors to ascertain this. I shall now explicate the same.

23 A rock with copper content resembles the color of copper. There are variegated rocks, spotted rocks, and rocks of pearl and gold color. Some resemble the color of deer and others the color of camel's nails. Some are bright like moonlight and others resemble fire. Still others appear like the sun.

24 They are of the color of ashes and collyrium or as bright as crystal too. Some are lustrous blue and others whitish. Some have unusual yellowish green color of the *haritalas* (yellow orpiment or arsenic trisulfide). A rock facing south cannot be cracked easily.

25. And I shall now explain in detail, several techniques, most wonderful in nature for cutting rocks and also the medicines to be used in water for the purpose, so that the implement neither bends nor becomes blunt in the process.

26. The rock must be heated first by burning firewood and then should be sprinkled with water mixed with (leaves of ?) *palasha*, *jambu*, *dhava*, *sadara*, *shirisha*, *vanjulaka*, *tinduki*, *bhallata*, *chuncha*, *khadira*, and the like

27 *Badara*, buttermilk, and *kulattha* must be soaked for a period of seven nights so as to procure a sour gruel. When this is sprinkled over the boulder preheated with fire it can be easily smashed.



28. When water mixed with chalk is sprinkled over the preheated boulder and if it is reheated and besprinkled again; similarly, if the boulder is sprinkled with acid water mixed with the *shara* grass, it breaks into pieces without fail.

29. A tough boulder when sprinkled with heated raw sugar and natron (impure alkali or sodium carbonate), water mixed with turmeric (*nisha*), *kana*, and oil of mustard, along with sour gruels, breaks without much effort.

30-31. A boulder can be smashed by sprinkling with ashes of *apamarga* mixed with the bark and leaves of *nimba*; with *guduchi* mixed with ashes of sesame and *nala* as also of *tinduka*; with cow's urine; with water mixed with oil and buttermilk, and also by applying a mixture of raw sugar and *siddhartha* to it.

32. . . . \* and when daubed with droppings of pigeons, etc., and also when dipped in oil and buttermilk, the tip of the hatchet does not bend when struck on the stone.

[\*The first line of the verse is defective and unintelligible.]

33. The tip of the hatchet becomes tough when it is treated with buttermilk and oil after heating. It may also be kept in oil or in a mixture of raw sugar and oil after treating with the sap of *bhringaraka*.

34. If a preheated iron weapon or hatchet is shaken in the alkali (ashes ?) of *kadali* . . . (the word used here in

the text appears to refer to the duration of time). it neither breaks while splitting iron nor blunts on a boulder.

35. If the tool is kept in liquor, *yavakshara* (an alkali prepared from the ashes of burned green barley corns) or milky sap of *arka* and then in a mixture of *sankola* oil and water, it does not blunt while splitting a boulder or iron, nor does its tip bend.

36. If water of a well is saline, *khadira* used with *chuna* (chalk powder), turns it into a desirable taste. If it is turbid, it can be purified with *palashabhasma*.

37. By putting the powder of *kakubha*, *musta*, *ushira*, fruits of *dhatra*, *kataka*, *loha*, and *rajadana* in wells or other water reservoirs, turbid, bitter, and foul smelling water can be turned into tasty, clean, and sweet smelling water.

38. When water has foul smell . . . and becomes turbid, fine powder of *kanakaphala* should be thrown into it. Similarly, *khadira* and *sara* (alternately, the essence of *khadira*) along with coconut (*sriphala*) thrown into a well turns its saline water into sweet tasting water.

39. The second chapter of Vishvavallabha dealing with water reservoirs as per the science of *vastu* is completed here.

Thus ends the second *Ullasa* of Vishvavallabha dealing with water reservoirs, by Mishra Chakrapani.

## Chapter III : Examination and suitability of ground

### Soil and propagation

1. Earth by nature is of three types: arid, wet, and ordinary. It is further distinguished on the basis of six types of taste and taste is determined by the color of the soil.

2-3. Soil is of six colors viz., dark gray, pallid, black, white, red, and yellow. Sweet, sour, saline, bitter, pungent, and astringent are the corresponding tastes. But this is an old theory. It is my considered opinion that the savor can be determined only by tasting the soil.

4. A piece of land that is infested with anthills, stones, and holes, that which is impregnated with salt, that which is inauspicious, that which is distantly located from water-source, and that which is sandy is poisonous for planting trees.

5. One must not plan a garden in a place in which trees and creepers are burned with frost and which is infested with *bimba* and *kanta*.

6. Land where the soil is soft and water is available nearby is good for plantation. Gardens should be planned on such sites in the interest of both the worlds. (Such gardens ensure happiness in life here and hereafter.)

7. Whether rock-strewn or soft, if the land has the color of heated gold, plants, flowers, *punnaga*, *rajadana*, *champaka* and such other trees grow there without much effort.

8. *Muchakunda* and trees belonging to its class, *shrikhandika*, *ketaki*, *ketaka*, *ambu* (a kind of *Andropogon*?), *rambha*, *ashvamaru*, *lakucha*, *jambu*, *madhu* and such other trees, creepers and plants grow well in wet lands.

9. *Champaka*, *patala*, *amra*, *bakula*, *ashoka*, *kola*, *udumbara*, *nimba*, *pippala*, *vata*, as also other cultivated varieties like *chuncha* and *ashana*, trees like *aksya*, *akshota*, *madhuka*, *shigruka*, *mahanimba*, *arjuna*, fruit-trees like *dadimi* and others and flower-creepers should be grown on ordinary (neither arid nor wet) land.

10. Arid lands are recommended for planting *dhava*, *khadira*, *palasha*, *vamsha*, *dhatu*, *ingudika*, *shivani*, *karabha*, *shaka*, (teak?) *shallaki*, *saptaparna*, *surataru*, *rajanika*, and trees belonging to the class of *tuduka* etc.

11. I have listed here some trees. The wise should guess others from them. They should think of such fruit-yielding and flower-yielding trees that can grow quickly on account of the natural characteristics of the land.

12. Due to divine power and due to extraordinary effort on the part of the rich and the rulers, trees and creepers grow even in unfavorable regions yielding fruits and flowers.

13. Bushes, creepers, and trees are propagated from seeds, stalks, and bulbs. Some are stated to grow both from seeds and stalks. I shall now distinguish them accordingly.

14. *Chincha*, *amra*, *champaka*, *madhuka*, *kapittha*, *jambu*, *punnaga*, *bilva*, *bakula*, *ashana*, *kanchanara*, as also *kshuri*, *kamu*, *panasa*, *akshaka*, *nalikeri*, *tala* and such others as also *tilaka* are grown from seeds.

15. Those also grown from seeds are *jambira*, *nimbuka*, *sadaphala*, *bijapura*, *naringa*, *seva*, *karamardaka*, *champaka* and the like, *karni*, *vidama*, *kamala*, *panduraga*, *shyama*, *atimuktaka* and others.

[*Karni* could not be traced but *karnikara* as the name of a flower is well known. *Vidama* could not be traced; probably it is coined from Hindi *badam*. *Prunus amygdalus* (?) ]

16. *Jati*, *gulala* (not found as name of a tree), *taruni* (not found as a name of tree or creeper), *navamallika*, *malli*, *japa*, *tarala* (given as 'thorn-apple' by Monier), *kunda*, *shukhandi* (given as a shrub by name *Abrus precatorius* L. by Monier), *kubja*, *tambulika*, *salila*, *ketaki*, *ketaka*, and such others are grown from stalks. Only a few are stated here.

[*Salila* could not be found as name of a tree but it means water. Could it also be an aquatic plant as suggested in the case of *ambu*, which also means water? alternatively, could both *ketakambu* and *sahlaketaka* denote some variety of water growing *ketaka*]

17. *Bumba*, *snuhi*, *chandraka*, *sinduvvara*, *shrikhandika*, *ashvattha*, *vata*, *palasha*, *dadima*, *plaksha*, *mumudru*, *vamsha*, *draksha* and such others are grown both from stalks and seeds.

18. *Kumkum*, *shringavera*, *vidarika*, *surana*, *pitika* etc., grow from bulbs. *Ela*, *ambuja* and such other plants are propagated both from seeds and stalks. Such is the opinion of the wise.

19. *Rambha*, etc. are grown both from bulb and stalk. The wise should similarly infer other plants suitable for growing in gardens after observing and consulting garden keepers.

## Trees near residence

20. Trees that should not be grown close to residence and in the wrong directions are now listed.

21. *Bijapura*, *jambu*, *haridra*, *badari*, *palasha*, *shleshmata*, *chincha*, *arjuna*, *kanchanara*, *kuranjaka*, and *aksha* are inauspicious and should not be grown in the home gardens.

22. One should particularly avoid growing thorny trees and trees that ooze out a milky sap, either in the garden or in the vicinity of the house. For their own well-being, people should cut off trees, which do not yield fruits even though such trees are found growing there naturally.

23. All trees which do not yield fruits or flowers as also all the wild varieties of trees like *ankola*, *bibhitaka*, *eranda*, *siddhartha*, *nilika*, etc., must not be planted in the home gardens.

24. All trees, creepers, bushes that yield flowers and all those which are known to produce fruits, medicinal plants

as also *arka* and such other trees, should be grown in the home garden.

25. *Vata* is auspicious if planted to the east of the house. So is *udumbarika* to the south. *Pippala* and *plaksha* are auspicious in the west. The northern quarter should not (?) be excluded.

[The text here appears to be defective as it gives the opposite sense to what from the context appears to be the intended meaning. The particle 'na' appears to be out of place. Replaced by 'nu' it would mean, 'one should, however, desist from laying a garden to the north of the house'. This appears to be the intended sense as no tree is recommended for planting in the northern direction.]

26. This rule (about not planting certain trees) holds good if . . . \* or if the garden is situated on the outskirts of the village. However, at a far away distance from the village all trees, even those that are forbidden (for home gardens) should be planted.

[\*One line is defective.]

27. Gardens must not be laid to the southeast, south, and northeast of a city. They are auspicious when planned in the east (reading '*sarva*' as '*purva*'), west or north of the city . . . \*

[\* Unintelligible text.]

### Plantation inside a fort

28. Depending on the place available, an ordinary garden of desirable measurements should be planned even inside

a fort. All trees, whether forest varieties or cultivated ones, can be planted there without any harm.

29. *Champakā, malatī, kurabakā, nirmalika, vuthika, shrikhandi, kanavira (karavira?), kunda, bakula, vasantika, sevati* (appears to be of non-Sanskrit origin), *karni, kubja, gulalā, hemasumana, sindurika, ketaki, bandhuka, machakunda, ketakā, japa, . . . \**. *kimshuka* should all be planted in it. These are the flower yielding kinds.

[\* *Ketaki* appears twice in the list. The word '*nihmallimu*' is unintelligible besides being a misfit in the meter and is left untranslated.]

30. *Malurā, badarī, rasalā, karakā, . . . , shripālā, chunchā, mardakā* (perhaps short for *karamrdakā*), *nimbu, puga, phirasa* (could not be traced, appears to be of non-Sanskrit origin), *nuta* (could not be traced), *vata, ashvatthakā, kharjurī, panashā, kapittha, karahā* (could not be traced), and the beneficial *sanjirika* (could not be traced), *vamshā, udumbarī, shalā, talā, jatilā, rohitalā, patalā*.

[The verse gives only the list of trees. The sentence runs into verse 32.]

31. *Rajadana, ashoka, kadamba, jambu, jambhira, naringa, sadaphala*, and such others. *byaddhva* (synonym for *byapuraka*), *rambha, amlakā, dadimī, nalikerī*, those called *kamala* and *kala*.

[This is also a list of trees in a sentence with its predicate located in verse 32].

32. *Ashota* and *pista* (both are evidently non-Sanskrit words), *lakucha*, *vidama*, *tambula*, *kailasha* (not found as a name of a tree), *shatapatri*, *mrudvi* and also such other trees, creepers and bushes yielding flowers and fruits should be planted (in the garden inside the fort.).

33 A wise person should plant *karamardaka*, *vamsha*, etc., to the east, *draksha*, *paravata* etc., to the south and *kapitthas* to the west.

34. He should plan the plantation of other trees commonly observed on the land, in the north. Similarly he should plant the trees as per their class, viz., highly distinguished, mediocre and inferior, both in a garden and in a forest.

35. Thus the third chapter of Vishnavallabha dealing with soil testing and propagation of trees is completed here.

Here ends the third *Ullasa* of Vishnavallabha, composed by Shri Mishra Chakrapani.

## Chapter IV : Propagation and plantation

### Plantation

1. Rainy season is the best time recommended for sowing all types of seeds and planting trees, etc., They should be planted after it rains. Autumn and spring are mediocre seasons for the purpose.

2 Winter and summer are both contraindicated for plantation. A senior planter may plant trees if advised

by some (local) people. All seasons are equally good for plantation when extra effort is put on watering.

3 An ordinary land with soft soil is good for planting all types of trees and sowing all types of seeds. The special type of soil recommended for certain trees is explained hereunder, describing its color and so on.

4. *Udumbari*, *tinduka*, *vira*, *chuncha*, *vata* and trees of its class, *rajadana*, *champaka* and trees of that class along with *vamsha*, *jambu*, and *pichu* can grow even in a rocky terrain.

5. Trees, creepers, and bushes either grown in villages or in forests, do not grow in a soil infested with stones. *Rajadana*, *bakula* and *champaka* cannot grow in a soil mixed with mica.

Land infested with white mica or chalk and the one that is mixed with metal particles is not favorable for plantation  
...

[Two lines are missing here. Also there is some confusion in the numbering of verses.]

6. Twigs without shoots are good for plantation. Those with shoots are mediocre. Those with flowers and fruits are inferior and must not be planted, as trees do not grow from them.

7. In summer, branches with leaves are good for plantation. Those with shoots should be planted if rainy season is to start shortly. In rainy season branches with

well-formed thick stem should be preferred for plantation. (According to some, trees should be planted in the *vasanta* (spring) season. According to others they should be planted after the rainy season.)

8. A field from which ripe grass (or *harital* (?)), *masha*, and *tila* are completely cut off and which is plowed repeatedly is suitable for a garden.

If one suspects existence of termites etc., one should plant *ajagandha* and *shatapushpi* (fennel) in that place.

9. Pits should be first kept ready heating them from inside and filling with soil. Seeds should be treated with dry cow dung and then with clarified butter and honey.

10. After rubbing them in dung or after smearing them with a mixture of ashes of *tila* plants and seeds and clarified butter, the wise should sow them at proper places

11. Even an old seed (alternatively, a large cumin seed), when smeared with *ankola* oil sprouts quickly. *Sarshapa* seeds thus sprout with two leaves just within a day.

12. After planting *puga*, or *nalikera* even along with the bark, in a pit or in a proper container filled with sand, it should be fed once with salt water and then sprinkled with plain water everyday. They grow within a month.

13 Fruits of *akhota*, *puga*, and *trinaraaja* as also of *kharjuri*, *kharika*, *badama*, and *nalikera* should be wetted with *ankola* oil, dung, and milk and sown in pits filled

with good sand. It should then be sprinkled with plenty of water.

14. The wise should then cover the place where seed is sown with grass or leaves of *palasha* till sprouts appear.

15 Then the saplings should be dug out along with roots and soil and smeared with *bidanga*, clarified butter, and honey and then planted finally in the pits.

16. The wise should smear the branches, roots, and trunks of trees with cow dung and plant them in pits filled with soil and dried dung sprinkled liberally with water.

17. Mediocre, superior, and inferior types of trees should be planted at a distance of sixteen, twenty, and twelve *karas* from each other, respectively. But this is an old theory.

18. Grass, bush, and creeper varieties should be planted leaving the distance of four, three and two *karas* at an appropriate location in designs of *vithu* (line or row), *swastika* and circle.

19 Big trees should be planted at a distance of twenty, medium ones at a distance of sixteen, and smaller varieties at a distance of twelve *karas*. Such is the rule made by some others regarding interim distance. But in my opinion—

20. —*karni*, *badama*, *lakucha*, *amlaka*, *biyapura*, and *dadima* should be planted leaving a distance of five, seven and ten *karas* in between \* *Champa* and others

of its class should be planted with seven, ten, and twelve *karas* distance in between and *chinha*, *rasala*, *rajadanaka* at a distance of sixteen and twelve *karas* from each other.

[\* This line is metrically defective.]

21. If trees are planted densely their branches are stunted. If planted too sparsely they are swept away by strong breezes. Hence all the trees should be planted along with their own class, considering their diameters.

22. *Ashoka*, *punnaga*, *shurisha*, *numba*, *champak* cause happiness and *mriddhi*, *jati*, *phalini* and such other creepers are auspicious. So these should be planted first in a garden.

23. Thus I have stated in brief the method of plantation of some trees. The fourth chapter ends here.

Thus ends *Ullasa IV* of Vishvavallabha composed by Shri Mishra Chakrapani

## Chapter V : Water management

### Watering

1. A newly planted tree should be sprinkled every morning and evening if it does not rain. It should be supported with sticks etc., fixed close to it so that it is not disturbed by a stormy wind.

2. By digging a basin around, it should be watered punctually. A discerning planter should also fill the basin with appropriate, good soil.

3. When after water is filled in the basin, it does not dry even after being used by the tree (after a considerable time) the next watering should not be done again till the water remains. The wise call this condition 'digestive disorder'.

4. If without sun's heat leaves of a tree fall and look frail one should always know that it needs nourishment and should water it.

5. In rainy season plants should be watered at mid-day. In winter they should be watered in the morning, in the spring season they should be watered in the afternoon, and in summer trees should always be watered in the evening.

6. Thus I have described the method of watering the trees as per the season and the condition. The fifth chapter of the book ends here.

Thus ends *Ullasa V* of Vishvavallabha composed by Shri Mishra Chakrapani.

## Chapter VI : Protection and care

### Protection

1. Storm, frost, smoke, fire, insects, cobwebs and rats can endanger the trees. So one must strive hard to protect the trees from them.

2. By fixing sticks around the plant to support it, there would be no danger to it from strong wind. By selecting

a proper site for the garden, safe from fire, trees can be guarded against the danger of smoke.

3. Trees planted in designs of *mandapa*, etc., should be vigilantly protected from fire. In grassy lands, they should be protected from conflagration. Destroying the rat holes, using medicines and mantras written on leaves are the remedies for protecting the trees from rats and insects. The mantra which is given in *Sarangapaddhati* is as follows:

'Om! Swasti!! . . . Hum! Phat!' i.e. ('Hail! May good prevail!) Hanuman, who disappeared after showing his valor to the world, revitalized by Indra (?),\* commands the rats, moths, ants, grasshoppers, *karabhas* (could not be traced as a name of pest), . . . ,insects, *gandhika* (could it be *gandhila* which means wasp?), . . . must not stay here. If they do, they will be punished with physical seizure. He moves like a lion among the apes, roars like a cloud in a storm, the sound of which crossed the boundaries of ocean. *Hum! Phat!*'

[\*The text is corrupt at several places.]

4. After writing this mantra properly on a leaf, and muttering the same it should be kept beneath the ground after digging a little. Insects, moths, rats, ants, etc., then disappear.

5. In between smaller trees, the wise planter should plant densely in the field *shatapushpa* and *kuberakshi* as a result of which he can get rid of insects.

6. He should also protect the smaller varieties when they are young, from frost by constructing temporary sheds covered with grass etc., and by spreading leaves (around the trunk).

7. He should treat the roots with powdered sesame and sprinkle ashes over it. Cobwebs can be removed by cloth or grass fastened to an end of a stick or by a feather of a bird (peacock?).

8. Clever planters should protect all trees by constructing a temporary shade, or by fixing thorny plants or by digging trenches or by some other device as per the season.

9. The sixth chapter of the book *Vishvavallabha*, dealing with the protection of trees, agreeable to the minds of the learned, ends here.

Thus ends the sixth *Ullasa* of *Vishvavallabha*, composed by Shri Mishra Chakrapani.

## Chapter VII : Nourishment and growth

### Nourishment

1. Having protected the trees in all possible ways, one should strive for their healthy growth by using special nourishments and medicines, etc., I shall now describe nourishment formulas, the application of which is frequently experienced. In other works many more, requiring the use of animal flesh are stated.



## **Kunapa, the liquid manure**

2. Fat, marrow, skin, blood along with the marrow secretion of ram, sheep, deer, fish and so on should be mixed with water and cooked on fire. When properly cooked, milk and cold water should be added.

3 Oilcake of sesame, honey, and clarified butter should be added to the mixture and the pot should be removed from fire to be kept in a warm place for a fortnight. This liquid called *kunapa* is nourishing for trees.

4. Milk mixed with water is good for the growth of *tinduka* trees, *priyalabhasma* (ash from *Buchanania lanzan* Spreng.) for the coconut trees, and water removed after washing rice for *amra* and other trees . . . \*

[\*The last line of the verse is missing.]

5. *Kharjura*, *bilva*, *lakucha*, *ashana*, *nalikera*, and *akshotaka* grow well when fed on powdered *sarshapa* and *tila*. *Panasha*, *amra*, *madhuka*, and *champa* should be fed well with rice-water mixed with oilcake, except in summer.

6. Sprinkling with *kunapa* is always beneficial to all the trees for increasing the produce of fruits and flowers. Especially in the case of *dadima* trees even fumigation with its vapours results in fast growth of big-sized fruits.

7. When *dadima* tree is smeared with a mixture of fish, clarified butter, and *triphalā* (*amlaki*, *bibhitaki*, and *haritaki*) and is then fumigated with clarified butter and *triphalā*, its fruits ripen well besides being large in size.

8. *Dadima* trees grow healthy if sprinkled with decoction of *kulattha* powder and if filled at the root with earth sprinkled with decoction of *karpasī* seeds and cattle dung.

9. Soaked *masha* along with the water is stated to be good for the growth of fruits of old *amalaki*. All trees produce sweet fruits when sprinkled with milk

\*

16 *Draksha* grows quickly and yields plenty of flowers and fruits just within the winking of an eye (as it were), if sprinkled after feeding the root on faeces of cocks.

[\*Six verses (nos. 10—15) are missing.]

17. *Champaka* and *keshara* are nourished well by *priyangu*, *siddhartha*, *vacha*, *haridra*, *bidanga*, *gunja*, *tila*, *numba*, and *krishna* (*krishna*?) churned in a mixture of clarified butter, *ashvakarna* and water.

18 *Panasha* grows well with certainty yielding quickly plenty of very sweet, tasty fruits when sprinkled with water mixed with *vacha* keeping a stalk of *palala* in it.

19. *Madhuka* bears plenty of flowers when sprinkled with decoction of *koshataki* leaves and *shipha* in combination with *krishna*. That the same result follows also when it is thoroughly fumigated by the same mixture is indeed a wonder

20. If the branches of *madhuka* tree are kept under restricted growth by tying them with a thick rope, made of *kodrava*, it bears plenty of flowers even when it is small.

21 *Kaputtha* and *bilva* yield sweet and seedless fruits if after feeding with the powder of *madhuka* mixed with milk, clarified butter, and honey at its root, it is also watered with the same mixture.

22. If *biyapura* is treated with mixture of *bidanga* and dung of ram, wild goat, and pig and if later it is sprinkled with water mixed with horse urine it certainly bears plenty of fruits

23. *Badari* is enriched with fruits if treated with water mixed with honey, *yashti*, and *tila*. *Patala* bears beautiful flowers if sprinkled with water mixed with decoction of *karpasi* seeds.

[Third line is defective.]

23. (23 a) If sprinkled with *tila* water, clarified butter, and manured with fish and meat, *shephalika* and *pitika* blossom in a day.

24. Sprinkled with decoction of *masha*, meat, raw sugar and milk, *naranga* tree bears large and juicy fruits.

25 By sprinkling water from gruel prepared by fermenting *karkandhu*, *methi*, *tila*, buttermilk, *rodhra*, and curd, then *priyangu*, *punnaga*, *kadamba* trees produce fragrant flowers within ten days.

26. *Jambu*, *amra*, *ashoka*, *dhatrī*, *kamalakha*, *lakucha* . . . should be scratched at the root and a mixture of *jambala*, milk, *rodhra*, along with honey, clarified butter and *tila* should be applied. Then they should be sprinkled with water mixed with honey and milk for a period of

ten days. This procedure makes even the unproductive trees produce fruits sweet like nectar.

[Defective text.]

27 *Lakucha* yields plenty of flowers rich in fragrance within ten days if after depositing at its root a mixture of *tila*, raw sugar, and *bidanga*, it is provided with powder of *madhuka* flowers along with good quality earth and sprinkled with water mixed with *kola* root.

28. It is beneficial to scratch the *chuta* tree in the spring season for the growth of blossoms as per the advice of the sages.

29. Ashes prepared out of rice and cow dung are good for *kadalīs*. Decoction prepared from the husk of rice is particularly beneficial for *trinadru*.

30. *Ashoka* gets rich blossoms after being kicked by a beautiful lady, if it is smeared with clarified butter and reddish soil and sprinkled with water mixed with *kola*.

31. *Bakula* blossoms when a charming lady, spits liquor on it, *tilaka* by her embrace and *ashoka* when struck by her kick

32 A *pankaj* creeper smeared with soaked *masha*, clarified butter (?), anthill mud, and honey will emerge out of mud everyday with fully blown lotuses.

33. *Ketaki* will have very fragrant leaves if sprinkled with fragrant water in summer and with *kunapa* water at the advent of rainy season.

34. All trees planted carefully, fumigated with clarified butter prepared from cow's milk, nourished with good soil and sprinkled with water thickened with the mixture of any young female animal's\* marrow, blossom extremely well.

[\* '*Grishti*' generally means a young cow who has delivered a single calf. It also means any young female animal.]

35. It is in the interest of *amra* tree to wear a ring of a broken pot on its top, while *dadima* wearing a dead blue jay leads to good results according to sages

36. A good sprinkling at the root in the basin with oil mixed with *bhullata* root, *yava*, *milk*, *bidanga*, and with water mixed with *indrabiya* and depositing dried cow dung in the soil as also a fumigation with the same is conducive to the growth of trees removing their impurities.

37. A powder of *siddhartha*, *kadali* leaves, *shaphari* fish, and dung of hog and cat all taken in equal proportion mixed with clarified butter is beneficial for the growth of trees. When used for fumigation and smearing of trees, it acts as a strengthening medicine removing ailments and the bouncy tree, covered with blossoms looks healthy with branches and leaves so also with fruits.

This is Sarangadhara's verse.

38. Smearing with *bidanga*, honey, and *tila*, fumigation with clarified butter, good soil in the basin, and sprinkling with water mixed with *yava* and milk as also with *kunapa*

will be very helpful for the growth of newly planted trees.

39. Fumigation and smearing with *ummatta*, *vatarika*, *mallika*, mixed with *sinduvava*, *tila* and *masha* and with *yava*, clarified butter, and honey mixed in milk as also sprinkling with water with the same mixture is also helpful.

40. Equally beneficial is smearing with *sunthi*, clarified butter, honey, *bidanga*, and *kushta*, fumigation with husk and *bidanga*, and sprinkling with water or *kunapa*-water, especially in the case of trees with a milky juice.

41. Filling basins with good quality soil, sprinkling at roots with urine of goats, fumigating thoroughly with its vapors and sprinkling with water is immensely helpful to rid the trees of diseases and to make them grow healthy.

42. Sprinkled liberally with marrow of hog and deer and with decoction of *kola* and watered with a mixture of clarified butter and honey, all trees grow well, free of diseases.

43. Treated with *siddhartha* (white mustard) all trees grow healthy, rich in foliage and blossom, and yield a lot of fruits.

44. Small balls prepared with candied sugar, *madhuka* flowers, *yashti*, *kushta*, clarified butter, and honey should be kept at the roots of trees.

45. These are some of the recipes considered good for the nourishment of trees. . . .

The rest can be deduced from them. Whichever are beneficial for trees in their respective locales . . .

[Incomplete verse.]

46. Thus this seventh chapter of Vishvavallabha devoted to the directions regarding nourishment, composed with clarity, is suitably completed.

## Chapter VIII : Diseases and treatments

1. Trees may acquire disorders of *vata* (wind), *pitta* (bile), and *kapha* (phlegm) due to pungent and strong, bitter, heat generating and salty, and (excessively) sweet, sour, oily and salty decoctions.

2. Like human beings, trees also suffer from diseases due to imbalance in wind, bile, and phlegm. As such, I shall describe hereunder, their symptoms and remedies.

3. Although well nurtured with water, nourishing substances, and manures, trees are subjected to ailments, if eaten away by insects, etc., if wounded, if scorched with frost or with fire, and also if struck by lightning.

4. If broken by strong wind, affected by age, hurt due to rubbing (against branches of closely planted trees, etc.), if shifted to another location, and if too many birds take shelter on them,

5. if too sparsely spread out, if affected by any corrosive, acrid or saline substance\*, if troubled with

too much medication etc., if wrongly treated or diagnosed, if starved, and if imbalance in wind, etc., occurs.

[\*Defective text.]

6. These are the chief causes leading to the suffering of trees. So every effort should be made to find out the cause of suffering and to adopt corrective measures.

7. There are some trees and creepers originally belonging to other countries. They just do not grow here after planting saplings or sowing seeds.

8. That is due to unsuitability of this soil, of (indigenous) seasons or of its natural properties\*, and due to lack of complete knowledge regarding their nurturing and care or due to god's will.

[\*Unintelligible text.]

### Wind related disorders

9. A tree affected by wind disorder is dry, small, slender, tall, sleepy, and faded. It bears no, or very few, flowers or fruits.

10. Trees suffering from wind-related diseases should be sprinkled with bitter juices of plants (to generate heat in plants) with watery decoction of oily flesh, or should be sprayed with powdered cow dung.

11. Wind disorder of trees can be set right by sprinkling water mixed with *nirgundika*, *aragvadhā*, leaves of *panchashakha*, and *ambu*, or by smearing their roots with the same mixture with the addition of *tila*

12. Covering the tree, feeding it with oilcake, sprinkling with goat's urine at the root, and sprinkling water mixed with *kulmashaka*, goat dung, bark of *amra* tree, and *ashvagandha* are also desirable measures.

13. Trees suffer from dryness\* and develop knots of the size of small balls due to wind disorder. Smearing with a mixture of cow dung, *bhallataka*, and marrow or sprinkling with *kunapa* can cure these.

[\*Reading *Kauksha* in the text as *rauiksha* with the help of *Upavanavinoda*-182.]

14. Sprinkling with decoction prepared with *rasna*\*, *ashvagandha*, *pavanari*, *naga*, and *kana* or with water mixed with *shatapushpika* can cure the wind disease in a tree, even in its advanced stage.

15. Fumigation with a mixture of *nirgundika*, *guggula*, *shepha*, *sarpi*, *kubera*, *netra*, seeds of *asana* as also filling goat dung and oilcake at the root yield favorable results in the treatment of wind disorders.

### Bile related disorders

16. A tree suffering from a disease caused by imbalance of bile is slender, has pale whitish leaves . \* and has dry branches. It cannot stand the heat of the sun. Its fruits ripen at an odd time of the year.

[\*Defective text. Reading *sushpa* in the text as *shushka*.]

17. Oily, cool, and sweet juices and sprinkling with cool water mixed with cow's milk, *sita* and *vida*\* cure the bile imbalance in no time

[The verse is metrically defective. \**Vida* is stated to be a kind of medicinal salt. 'A kind of salt either factitious salt procured by boiling earth impregnated with saline particles or a particular kind of fetid salt used medicinally as a tonic aperient commonly called *vit-lavan* or *bit-noben*, it is black in color and is prepared by fusing fossil silt with a small portion of emblic myrobalan the product being muriate of soda with small quantities of muriate of lime sulfur and oxide of iron' - Sushruta as quoted by Monier William.]

18. The bile imbalance can be cured if treated with *ushira*, *musta*, honey, milk and *sarpis* or if the tree is smeared with *jambala* . . . \* or fumigated with *sita*, honey, and large quantity of clarified butter.

[\*Defective text.]

### Phlegm related disorders

19. A tree suffering from phlegm disorder has oily leaves and bark; whitish, undersized flowers; slimy and tasteless fruits. Round in shape it is encircled by creepers. It develops shoots with delay.

20. Pungent, hot, dry, and bitter decoctions and juices quickly set right the phlegm disorder. A tree suffering from phlegm gets relief if sprinkled with warm water, too.

21. Decoctions prepared from barks of *plaksa*, *arjuna*, *udumbari*, *saptaparna*, and *nimba* as also of *vasa*, *ghana* and *rohita* are prescribed for trees suffering from phlegm

22. Sprinkling with decoction prepared from *vyaghri*, *sahachara*, *arishta*, *vasa*, *khadira*, and *rohita* is beneficial for trees suffering from phlegm.

23. A tree totally affected by phlegm too, can recover normal health without any doubt, if treated with decoction of *marudbhava* (*marutsambhava*-radish), *amrita*, *vasa*, *vyaghri*, and *rohisha*\* (kind of grass).

[\*Defective text.]

24. Smearing with the paste of *madhu*, *katphala* mixed in the juice of *vyaghri* is very fruitful for trees suffering from phlegm. Within a week the trees are densely covered with leaves

#### **Disease of indigestion caused by excessive watering**

25. Sleeplessness, paleness, falling of shoots, drying of branches at the end, infestation by ants, foul smell like that of fish are the symptoms of the disease caused by excessive watering

26. Making incisions with gentle strokes of a sharp axe, an expert should allow the fluids produced by the disorder to flow out from the root of the affected tree proportionate to its size and then should smear it with paste of *bidanga*, honey, clarified butter, and *tila*, fill fresh soil in the basin and sprinkle it with a mixture of milk and water. The tree will be freed from the ailment.

27. It is also helpful to provide the tree with ashes of barks of *plaksha* and *arguna* and reduce the quantity of water . . . . \*

[\* Incomplete verse.]

#### **Indigestion caused by excessive intake of food (manure)**

28. Due to indigestion caused by excessive intake, trees do not produce leaves. They are infested with ants and their (existing) leaves become dry.

29. *Triphala* (*amlaki*, *bibhitaka*, and *haritaki*) and *kuberakshi* provided at the root followed by watering and smearing with paste of *bidanga*, *ingudi*, and honey are measures recommended for them

30. Powdered leaves of *kankata* (vai?) provided at the root and fumigation and sprinkling with a mixture of honey and clarified butter frees the tree from indigestion.\*

[\* Defective verse.]

#### **Overmedication**

31. Due to overmedication, twig ends of trees dry, barks fall off, and leaves become sickly.\*

[\*Defective text.]

32. Applying paste prepared from the mixture of *karkandhu* and *chara* seeds, soaked in cow's milk, toxicity caused by medication can be cured.

33 After drenching thoroughly, the soil at the root should be removed and the basin should be filled with fresh soil. Then thickly smearing the tree with honey, clarified butter, and milk, a mixture of milk and water should be sprinkled.

34. Fumigation by a mixture of *sita*, clarified butter, and *guggula*, cures the disease of the tree and it becomes beautiful again with the growth of lovely foliage and healthy bark.

### **Insect related disorders**

35. Without any disturbance in the three elements if a tree loses its shoots, branches dry at the end (dieback), bark falls off, leaves lose color and the tree appears very sickly, the cause should be traced to insects.

36. Insects are of two types, external and also internal. Some external insects live on bark while others on leaves, flowers, and fruits.

37 An insect named *kandaraka* (borer) lives in between the root and the branches. The tree can be destroyed when infested by it. As such it should be treated.

38 Insects originate from soil, water, and *dohada*\* (a kind of special manure). I shall state the remedies prescribed in the science.

[\*According to Monier Williams, *dohada* is a kind of fragrant grass used in manure for which he refers to verse 1-82 of *Naishadhiyacharita* by Shriharsha of 13<sup>th</sup> century. The word used there is *dohadadhupita* (fumigated

by *dohada*), and is an adjective describing *dadima* tree. Mallinatha, the commentator of the epic, explains the word *dohada* quoting its definition from *Shabdarnava*, a lexicon. There it means, 'Any substance used by the experts to produce out of season, flowers, etc., on trees, creepers, bushes etc. and the process thereof'.]

39 A powder prepared from the barks of *aiagvadha*, *arishtha*, *karanya*, *saptaparna*, and *bidanga* soaked for a night in cows' urine and pasted on the affected parts of the trees frees them from external insects.

40. A paste made from the mixture of *bidanga*, *siddhartha*, *trikatu*,\* cow's urine, *bhallata*, and *vacha*, applied to the tree destroys insects living in between the branches retrieving the color of the barks.

[\* This is an aggregate of three pungent substances like ginger, black and long pepper or like dry ginger, pepper, and *pippali* (*Piper longum*) ]

41. Fumigation by the mixture of cow's horn, *bhallataka*, *nimbu*, *musta*, *vacha*, *vidanga*, *ativisha*, *karanya*, *saija*, *siddharthaka*, and *sindurava* draws out insects from within the trees.

42. Applying paste of dung of cat, jackal, and hog mixed in *siddhartha* and cow's urine, draws out insects hidden inside the trees and fumigation by the same mixture along with clarified butter wipes out the external ones.

43. Fumigated with a mixture of *nimba*, *siddhartha*, *vacha*, *vidanga*, *hingu*, and barks of *arjuna*, in combination with *tila*, milk, and water and sprinkled

with a mixture of milk and water a tree infested with insects (is freed from the pest and) once again becomes green with (a new growth of) branches and tender leaves.

44. All trees can be relieved from insects by sprinkling water mixed with fruits and bark of *ingudi*, and raw sugar. By applying a paste of milk, clarified butter, raw sugar, and *ingudi* or by fumigating with the same and by tying dog's bone on them, will rid the trees of insects.

45. When *palasha*\* tree, planted in between other trees, bears fruits, it prevents the water related diseases and water-borne insects from infecting other trees as does *ashoka*.

[\**Palasha* is said to attract all insects.]

### Treatment of pruned trees

46. Sprinkling with water mixed with cow dung, over the top, filling soil mixed with cow dung in the basin, and smearing with the paste of *bidanga*, honey, clarified butter, raw sugar, and milk cause growth of new shoots on a (partially) pruned tree.

47. If after anointing with *ankola* oil, mud from a borrow pit is applied to a pruned part of the tree and it is sprinkled with a mixture of water and milk, new shoots definitely grow on it.

### Frost burn

48. A frost burned tree shoots forth if a paste of *ankola*, milk, clarified butter, and honey is applied to the root,

if fresh soil, cow dung and oil are provided, if sprinkled and smeared with *tila* and milk and sprinkled in the end with water.

49. Shoots grow again on a frost burned tree, also if its root is treated with powder of *tila* mixed with that of *bidanga*, *kulmasha*, and *ayas* (iron), and if it is smeared with a thick paste of the same preparation with *ankola* oil.

50. The tree produces plenty of shoots if the root is provided with ashes of cow dung, if sprinkled with decoction of *nirgundika* and *shopha*, and if smeared and sprinkled with hog-marrow.

### Fire burn

51. A tree burned by fire grows leaves again if sprinkled with a mixture of milk and water, if anointed with honey mixed with lotus bulb (*padma*) and water, and if the basin is filled with ample, fresh soil.

52. A tree burned by fire also produces shoots if a paste of *karkandhu*, marrow, and honey is applied, if smeared with mud and sprinkled with *kunapa*, and if fully anointed with milk and *atast*.

### Lightning

53. A tree struck and burned by lightning does produce shoots in no time if it is liberally sprinkled with powdered *madhuka*, *mudga*, *tila* and *masha* gram mixed in milk along with *yava*.



54 A tree struck by lightning produces new shoots also if a paste of *ushira*, *musta*, honey and milk is applied and if sprinkled with water mixed with *sita*, *vidari*, *tila*, *nagajihva*, and flowers of *kumudvati*.

55 A tree produces shoots at the burned portion too, if a paste of cooling substances like lotus bulbs, algae, and mud are liberally applied and if sprinkled with water so that the application does not dry off.

### Wind

56. A tree wrecked by wind should first be supported by props and secured by tying a rope. Then a paste of barks of *plaksha*, *amla*, and *udumbara*, honey, clarified butter, *sita*, and milk should be applied to the wounded area. Soil mixed with *plaksha* and dried cow dung in ample quantity should be filled at the root and the tree should be sprinkled with a mixture of milk and water. Treated thus, the tree recoups (from the injury) and is once again densely covered with leaves and branches bearing foliage and producing rich yield of flowers and fruits

[Defective text.]

### Friction

57. A tree afflicted by friction (with nearby trees etc.), even though old, becomes healthy, along with the affected (rubbed off) part (?), yielding a rich produce of fruits again, if fresh soil is filled after digging at the root and then sprinkled with the mixture of milk and water.

### Transplantation

58 A tree shifted from its place and transplanted should be sprinkled with a mixture of *bidanga*, milk, and water and the root with *madhuka* powder and water. Fresh soil mixed with cow dung should also be filled at the root.

### Trees ruined by animals

59. If animals like elephants, etc., that take shelter under a tree and damage it, dry cow dung powder should be spread beneath it and set on fire. Fresh soil in the basin at the root, application of honey and clarified butter and sprinkling with a mixture of water and milk should then follow.

### Contact with unhealthy trees etc.

60 The (unhealthy) tree located in the midst (of other trees) should be cut off, as a result of which other affected trees can be cured quickly. If fresh soil is filled, digging out the old one, and then it is watered, a tree afflicted due to unhealthy soil is cured.

61. Alternately, if the affected tree is young, it should be shifted to a new place. After preparing a pit, burning it, and filling good soil, a tree afflicted by unhealthy soil should be replanted and watered profusely

### Contrariety regarding seasons\*

[\*The title of the topic is left half finished in the text.]

62. If contrariety with reference to the seasons is observed in a tree and if it does not respond to *dohada*—(a special kind of manure or treatment of trees believed to trigger blossom)—it needs attention. It should be sprinkled with *kunapa* and water mixed with milk.

63. The tree should be carefully protected by esoteric methods like mantras, *yantras* (a mystical diagram supposed to possess occult power), *tantras* (magical and mystical formularies) and propitiation of gods by those, proficient in the respective field.

64. Digging earth near the affected tree, *tila* seeds should be sown. Fresh soil should be filled in the basins. The trees should be smeared with milk, clarified butter, and water. Sprinkled with water mixed with milk, bark of *arjuna* and *bidanga* is helpful in increasing the yield of fruits and flowers of trees.

### Lapses in the mode of treatment

65. Sprinkling with water mixed with milk can cure a tree suffering due to lapses in the mode of medication and make it fit to yield more fruits and flowers. Application of paste prepared with the mixture of *tila*, milk, clarified butter, and raw sugar and sprinkling with the same mixture are also helpful.

66. If the tree comes in contact with wrong medicines, etc., the wise planter should remove the old soil and fill the basin with fresh soil.

67. A tree, from which its sickly, pale leaves and fruits are falling down, the flowers of which are undersized

and shoots curved, if not watered, would soon cease to grow shoots.

68. The tree can grow green leaves and normal fruits if fumigated with honey and clarified butter and sprinkled with water mixed with milk and *yava* powder and also with *kunapa*.

69. A planter in his own interest should follow the instructions stated earlier (Ullasa VII) and do whatever is recommended for whichever tree. A prudent farmer should always treat the trees with *tila* and oil etc., in winter.

70. Similarly applying the paste of sugar, *tila* and cow's milk and sprinkling the same, mixed with water, all the dehydrated trees are completely cured.

71. If in spite of right treatment, a tree does not grow due to the disease, it should be transplanted at another place, if young.

72. All trees are normally relieved from common ailments by the application of clarified butter, prepared with *katvanga*, *bhillota*, *vacha*, *vidanga*, *siddhartha*, *kushna*, and the two types of *rajani*, mixed with milk.

### Discharge

72. Discharge of fluids from trees can be cured with application of barks of *dhava*, *vetasa*, *tarkari*, *pryangu*, and *arjuna* prepared in milk.

73. Discharge of trees also stops if sprinkled with water and decoction of *tila*, *yava*, *shatapushpa*, *fish*, and

*dhartura* leaves If sprinkled with a mixture of raw sugar, water, and milk, trees get complete relief and produce more flowers and leaves.

### Preventive measures

74. Cook fragrant grasses, *vidari*, *padmaka*, *ushira*, *pathya*, *tagara*, *rajani*, *kushta*, *shri*, *bidanga*, and *rodhra* together measuring a *prastha* (=1/4 *adhaka*), in water, *surataru* (?) and milk and keep. Mixed with *tila* oil it cures (common) diseases of trees.

75. A mixture of *bidanga*, *rodhra*, *sita*, milk, and water is always good for health of all trees and creepers in winter.

76. Changing soil in the basin and sprinkling with a mixture of *tila*, milk, and water is particularly helpful to trees and creepers in winter.

77. Regular watering of all trees and creepers and attending to other requirements are essential duties.

78. Several remedies for ailments of trees are described in other works on this science. Here I have stated some of them, which have been actually put to use. Experts should prescribe the recommended medication after using their own discrimination.

79. The eighth chapter of Vishvavallabha, composed by Chakrapani, dealing with diseases of trees ends here.

Thus ends *Ullasa VIII* of Vishvavallabha composed by Mishra Chakrapani.

## Chapter IX : Botanical wonders

### Wonders of seeds

1. Take a fully ripe fruit of *kumuda*. Take out the dry seed. Rub it with dry cow dung and then keep it in buffalo's urine for seven days\*. Sow the seed then, in faultless, pure soil. It produces *karavira*. What a wonder!

[\*Here and in the following verses of this chapter I have taken the liberty of changing the construction of the sentences in the English translation for facilitating easy rendering and reading. In the original the construction would be 'If you take . . .' Also, defective text has been interpreted with the help of a verse (289) of similar contents in *Vrikshayurveda*.]

2. Take a seed of *madhuka* or *amra*. Keep it for seven days in water in which fish and flesh are cooked. Take it out and dry it in hot sun. Keep it according to procedure, in a mixture of milk, clarified butter and *ankola* oil. When sown, it produces *brihati*. Seeing it, people are amazed.

3. Take a seed of castor and drench it with hog's blood and marrow. Let it remain in *ankola* oil for a day. When sown, it produces *karalla* (short for *karavella*?) creeper. How wonderful!

4. Take any seed and soak it in a mixture of marrow and flesh of hog and fish and milk of an ape (or any forest animal). When sown in earth it sprouts (climbs if it is a creeper) and yields fruits, too.

[The verse is defective and the meaning could be arrived with the help of verse No. 207. with similar contents in Upavanavinoda].

5. Make a hole in *dala* tree. Fill it with seeds of any (fruit) tree. Apply paste of calf dung. When the tree grows it bears fruits equal in size to the fruits, the seeds of which are filled in the hole.

6. Take a seed of *kushmanda*, *vartaka*, *patolaka*, etc. Soak it in hog's marrow. When sown and liberally watered, it bears respective fruits very big in size and without seeds. What a wonder!

7. Take a seed of *vartaka*. Roll it in a mixture of honey and clarified butter and dry in the sun. Make a hole in a tender *kushmandaka* that is hanging on the creeper and insert through it the above stated seed of *vartaka*. Close the hole immediately and apply cow dung. Extract it when (the *kushmandaka* is) ripe. When sown, it produces in its usual season fruits as big as *kushmandaka*.

[Defective text interpreted with the help of verse No. 218, Upavanavinoda]

8. Take any seed. Smear it with *ankola* oil and the marrow of hog or alligator. After sowing, sprinkle it with coconut water. It sprouts in no time (literally, instantly). A great marvel!

9. Soak a seed of *amra* in the blood of rabbit and tortoise for twenty-one days. After sowing, sprinkle it with a mixture of milk and water. When it grows into a tree, it indeed, produces fruits in all seasons.

10. Take any seed smeared with *ankola* oil. Mix it with human blood. Take a handful of soil in the hand and sow the seed in it. Sprinkle water. The seed sprouts instantly on the hand itself. A great wonder in this world!

11. Take a bulb of *kumuda* and steep it in *ankola* oil. Soak it in cow dung. Place it in an earthen jar filled with coconut water and mud. It produces (*kumuda*) flower!

12. Dig a pit and burn dry cow dung and hog's bones in it. Fill it with sand. *mulaka*, sown (planted) in it and watered liberally becomes as huge as a pillar and astonishes the world.

### Wonders of trees

13. Sprinkle a tree at the basin with a mixture of dung, *bidanga*, sugarcane juice, and oilcake. It bears flowers and fruits throughout the year, attracting the attention of everyone.

14. Dig a pit deep enough for a man-height. Cut it off from the rest of the soil by casing its walls internally with bricks on all sides. The tree planted in it bears fruits and flowers even as it is dwarf, always being a source of astonishment to the world.

15. Sprinkle *kadali* regularly at the root with a mixture of water and a decoction prepared from *ankola* oil and blood, flesh and marrow of wild boar. The wonder is that it yields fruits sweet like those of a mango tree.

16. Prepare a paste of *bidanga*, *yashiti*, and *madhuka* in warm milk. Add *yava* powder and raw sugar. Scrape a

(fruit) tree and smear it with the paste. Sprinkle it with a mixture of milk and water. The original pungent\* taste of its fruits becomes sweet.

[\*Defective text.]

17 Prepare a mixture of *bidanga*, *yashti*, honey, sugar, water, and milk. Sprinkle it on a tree initially yielding sour fruits. It is a wonder that the very same tree bears big sized sweet fruits.

18 Allow *varahi* to stay for three days in the mixture of clarified butter, *kunchika*, *bidanga*, *raji*, raw (uncooked) clarified butter, and *triphala* (*amlaki*, *bibhitaka*, and *haritaki*) along with sugarcane juice. Smear the root of the tree with it. Fill fresh soil and fumigate the tree thoroughly with the same mixture. Sprinkle with sugarcane juice. The tree then produces flowers and fruits out of season.

19 Tear open (a part of the trunk of) a young tree and insert there, any seed (of a fruit-tree). Paste it with calf dung. When the tree grows it bears fruits similar to those, the seeds of which are inserted. How strange!

20 Heat lightly with fire, old tree, the trunk of which is cut off. Smear it then with a mixture of *kinapa*, salt, honey, clarified butter, and milk. Sprinkle well with a mixture of water and milk. Pierce it at the root with a sharp iron nail. The dwarf tree then bears flowers and fruits in proper season. What a wonder!

21. Scrape lightly a branch of a tree. Smear with a mixture of honey, clarified butter, *bidanga*, and milk and tie it

with grass and bark. Sprinkle with a mixture of milk and water. Ripe fruits then stay on the branch for a long duration of time. That is the wonder.

22. Scrape the branch of a tree that has started producing fruits and tie a wet bark over it. The branch will bear the ripe fruits for a longer duration of time, causing even the wise to wonder.

### Wonders with negative results\*

23. Never sprinkle trees with water mixed with the decoction of *kulattha*. That ruins its flowers and fruits. Sprinkling with water mixed with salt, bark of *arguna*, *karkarika* and *kinshuka* also acts similarly (adversely).

24. The fruits of a tree sprinkled with decoction made out of fruits of *chinchini*, *badara* and *partha* as also of one, the fruits of which are smeared with *nimbuka*, *ambu* and clarified butter, never ripen. That, indeed, is strange.

[The scribe has noted in the margin '*samudralavana*, *chinchini*' indicating that a decoction made out of ocean salt and *chinchini* also has the same adverse effect on fruit-yielding trees ]

25. Sprinkling with decoction of *kasa*, *rishabhi*, fruits of *partha*, small *kola*, *tapodhana*, *eranda*, *sira*, and *amlaka* permanently ruins fruit-ripening of all trees.

26. Fruits do not ripen on the branch shooting from the trunk of a tree which is tied securely with skin of a recently killed goat.

[\*These were perhaps practiced on the trees of rival planters or enemies.]

### Wonders of flowers

27. Uproot a stalk of *hayari*, already planted. Keep it for three days along with the soil sticking on to its root, in a basin. Sprinkle it with water mixed with *ghana* and *ushira*. It then produces fragrant flowers, which is a wonder.

28. Smear the root of a (flower yielding) tree with a paste of *vidari* bulb and sugarcane juice. Sprinkle it with sugarcane juice by providing a basin. The tree then bears rich blossoms round the year, being an object of curiosity for people.

29. . . Sprinkle a good *palasha* with hail water\* and fumigate it with the smoke of *kundurū*. It always bears then . . . flowers of yellow color resembling *champakā* flowers

[\*Corrupt text]

30. Sprinkle a (white flower-bearing) tree liberally with water mixed with *nisha*, *kamshuka*, *karpasi*, and *rodhra*. Its bark then gets a golden color and its white flowers turn golden yellow.

31. Similarly, provide a tree bearing white flowers with soil from Saurashtra, with *manjishtha*, *hingulu*, with milk and pigeon's blood mashed into it. The flowers of the tree will turn golden yellow.

32. Sprinkle a tree, the flowers of which are devoid of fragrance, with water mixed with *dhava*, *khadu a*, *kapali*, *kushta* and fragrant substances or smear it with the same mixture. Provide it with soil, scented with flowers, at the root. The tree will then bear flowers laden with fragrance.

33. Sprinkle creepers like *yuthika*, *kanda*, *jaya*, etc. with a decoction of *ela*, bark of *nakha*, *tagara*, *ambu*, *kushta*, *masi*, *ghana*, and *ushira*. All of them then bear fragrant flowers

34. Fill soft ashes at the root of trees and creepers and sprinkle them with mixture of milk and water. They, thus, always yield rich blossom.

35. Sprinkle creepers like *jati*, *nemali* (*nevali*?), *malhika* with water mixed with barks and leaves of *nakha*, *ambu*, *tagara*, and *ushira*. All of them will then bear very fragrant flowers. A wonder indeed!

36. Provide the trees and creepers with manure of powder prepared from barks and leaves of *ela*, *jata*, *ushira*, *ghana*, *ambu*, *kushta*, *chakra*, and *hanu* (both names of different types of *nakha*) and *jati* and sprinkle them with water mixed with the same. All will bear fragrant flowers.

37. Fill with soil and cow dung at the root the *kushmanda* creeper that has . . . \*. When sprinkled, it always yields fruits of a large size.

[\*Defective text.]

38. First provide a *jati* creeper with soft ashes at the root. Then fill the basin amply with soil and cow dung

and sprinkle with *kunapa* liquid. It then yields blossoms in the spring season.

39. Provide creepers with the manure of *yava* powder and pounded *tila* seed at the root. Fill with fresh soil and sprinkle with milk and water. When grown up, they reach the height of trees.

### Wonders of fruits (according to other experts) – seedless fruits

40. Prepare a paste of *madhuka* flowers, *yashtimadhu*, *kushta*, and *sita*, in clarified butter and honey. Cover the root of a (fruit-) tree with it. It produces seedless fruits.

41. Scrape the trunk of a tree from where the branches shoot off. Insert the mixture of *gunja*, honey, *udumbara*, sugar, fresh clarified butter, and *madhuka* flowers. Paste with calf dung. The tree will produce seedless fruits.

### Naturally colored cotton

42. Prepare a paste out of *jivantika* leaves, *manahshulala*, (material containing red arsenic) piece of wood of *manjishtika*, *nisha* and *yava*. Mix it with cow's milk, milk of goat and sheep. Add *tila* seed and apply the mixture to *karpasika*. The color (of the cotton produced) will be sky blue.

43. Fill at the root of a *karpasa* plant a mixture of plant a mixture of *yava*, *misha*, *palasha*, and *tila* and water it with the same mixture. The color of the cotton produced by it will be red.

44. Prepare a paste of barks of *triphala* (*haritaki*, *bibhitaki*, and *amalaki*) and *shalmali* in combination with *nisha*, *kushta*, and *sidhu* (spirituous liquor, distilled from molasses). Smear and also sprinkle *karpasi* with it. It produces cotton of green color.

45. Prepare a fine powder of *kasi*, *nili*, *tila*, copper, *yashti*, *vacha*, and both the varieties of *nisha* (*haridra* and *karpuraharidra*). Smear a *karpasi* with it and sprinkle it with water mixed with the same. It will produce yellow cotton . . .\*

[\*Incomplete line. The reference to *krikachulaka*, i.e., cock's crest which is red, is not clear].

### Improving quality of produce

46. Sprinkle a *draksha* creeper with sugarcane juice after mixing *yava* powder thoroughly in it. Fumigate it with a mixture of fresh clarified butter and *bidanga*. It will surely produce sweet fruits when it ripens in the season.

47. Smear or sprinkle any tree or creeper with the above stated two mixtures. It will bear beautiful, tastier, and larger fruits although their original taste is sour.

48. Sprinkle the root of a sugarcane tree with water scented with the particles of *kasturika* (musk). When ripe, the sugarcane juice will be tastier and will have the same aroma.

49. Sprinkle sugarcane plant with water mixed with . . . *ushira*, *musta*, or *ambu* for a period of twenty days. The juice of the sugarcane will have the respective aroma.

50-51? I have recorded here some recipes useful in producing wonders. Experts should look for more in other works (on the subject) or learn them by observing others practicing them.

52. The ninth chapter of this book, Vishvavallabha, a source of delight to the learned, brilliantly describing the recipes of producing wonders has come to an end

Lakshminarayana copied this book in the year 1925 according to Vikramsamvat, and 1790 according to Shalivahana shaka, on the ninth lunar day of the dark fortnight of *Phalguna*, for the reading of Bhaktavara.



## **Commentaries**



# Commentary

Nalini Sadhale<sup>1</sup>

Vishvavallabha is a treatise written by Chakrapani on the science of plant life, which closely resembles Surapala's Vrikshayurveda, and deals with the same subject. This contains information on the following aspects of plant life: Tracing of groundwater, construction of water tanks, lakes, etc., classification of land, instructions on propagation and plantation of various trees, watering and special nourishments for good results, plant protection and care, diseases of trees and their treatment, and botanical wonders.

'Vishvavallabha' means 'dear to the world'. The title 'Vishvavallabha' does not reflect the above contents of the book as the title 'Vrikshayurveda' does. The author might have named the book as 'Vishvavallabha' because the subject of plant life is dear to all. Although it appears self-eulogizing, he only follows the tradition in which titles like 'Jagadacharyapustaka' (- A teacher of the world), 'Sarasvatikanthabharana' (- The ornament for the neck of the goddess of learning) are not uncommon.

Many of the topics of Vishvavallabha listed above form part of Surapala's Vrikshayurveda too. In fact, Vrikshayurveda is a name of a science that deals with

plant life and not of a particular text. In works of ancient scholars on this subject, like Varahamihira (6<sup>th</sup> century) (Bhat, 1981) and Sarangadhara (13<sup>th</sup> century) (Majumdar, 1935) the word vrikshayurveda is used in plural, signifying thereby that any book on the subject of plant life and tree-plantation would be called vrikshayurveda. While Kautilya in the 4<sup>th</sup> century BC already knew the existence of this subject as a well-developed science and references to it kept recurring in later literature, an independent treatise on the subject came to light only with the publication of Surapala's Vrikshayurveda in 1996 by the Asian Agri-History Foundation (AAHF), Secunderabad, India. It is a matter of a happy coincidence that within seven years, yet another work of the same merit and authenticity on the same subject, by an equally erudite scholar in the field, is now coming to light. This effort of bringing forth traditional wisdom was initiated by Dr Y L Nene, Chairman, AAHF, followed by a tenacious search by Dr S L Choudhary, Honorary Advisor, AAHF, Udaipur, in procuring a photocopy of the manuscript of Vishvavallabha from Rajasthan Prachya Vidya Pratishthan, Jodhpur in 2002.

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Customarily, authors of ancient Sanskrit texts provide information about their family history, date, preceptor, patron, etc., in the colophons of their texts. In some cases scribes include such information at the end of their copies. Unfortunately, in the present instance both the author and the scribe are silent on this. As a result, we do not have any direct information about the author Chakrapani even on these bare minimum facts, from his own text. We have to depend, therefore, on external evidence, which in this case is fortunately available and can be amply corroborated by the contents of the text.

## History

In the Hindi book 'Maharana Pratap-Mahan', based on the life and history of Pratapsimha (1540—1597) the famous ruler of Mewar, who belonged to the Guhilot dynasty, Paliwal (1998) states that Maharana Pratap, besides being one of the greatest warrior-rulers of his time, also initiated and encouraged academic activities in several fields. He quotes in this connection, the name of Chakrapani crediting him with the authorship of three books:

1. Rajyabhishekapaddhati, dealing with coronation
2. Muhurtamala, a work on astronomy
3. Vishvavallabha, dealing with the science of plant life

Jawalia in his article too, mentions the same three as works of Chakrapani. (It appears from his account quoted

from Muhurtamala that Chakrapani's was the fifth generation of this learned family enjoying continuous patronage of Guhilot dynasty) Being a great Sanskrit scholar and a physician, Chakrapani must have been, in his own right, a reputed person of Mewar in the latter half of the 16<sup>th</sup> century. He also had the fortune of enjoying the patronage of one of the most towering figures of medieval Indian history, the Maharana Pratapsimha of Mewar.

Chakrapani composed Rajyabhishekapaddhati, probably around 1572 AD (1569 according to Jawalia—see reference in Foreword) in the year Rana Pratap was coronated. According to his own statement in the present text, he composed Vishvavallabha on being prompted by the 'king' (IA 4). Although he does not mention the name of the king, it can be easily inferred that he must be referring to Maharana Pratap whose patronage he enjoyed. Hence it is possible to guess that the author composed Vishvavallabha later than 1572, when after coronation, the king would have more leisure to pay attention to other academic matters. Bhandarkar (as quoted by Jawalia), in his 'Survey Report of the search of Manuscripts in Rajasthan', has ascribed 1577 AD as the exact date of this composition.

## Predecessors

In the opening verse of Vishvavallabha, salutations are offered to the feet of Raghavendra and to those of the author's preceptor. Although the preceptor's name is

not mentioned. more than one distinguished personality named Raghavendra is referred to in medieval history of India. There was one Raghava (Chaitanya), an ardent devotee of Dattatreya, who lived in Girnar (Gujarat) around 1550 AD (Chitrav, 1937). His father was in the service of the Mughal rulers but Raghava despised them for the atrocities they perpetrated towards the Hindus. He was the author of works on yoga, *vedanta*, etc., and was a preceptor of Keshavachaitanya. It is chronologically possible that he is the one to whom Chakrapani has paid his homage. However, there is no evidence to prove this. Sanskrit writers usually offer prayer to their deity in the opening verses of their compositions which throws some light on their religious sect suggesting the creed that their preceptors might have followed, but the present author has not chosen to do so. Yet another Raghavendra is the more famous Raghavendrathirtha of Karnataka, a *Madhva* by faith, who propagated the philosophy of dualism and established a *muth* at Mantralaya. He died in 1671. He could not possibly be the one referred to by Chakrapani who flourished in the last quarter of the 16<sup>th</sup> century. The contents of the present text clearly suggest that the author belonged to the medieval Rajasthan area (in present Saurashtra region of Gujarat) and the possibility of his having such connection with a saint in the south is remote.

At the end of each chapter of Vishvavallabha, the author Chakrapani mentions his own name as the composer of the work, both in metrical and prosaic forms, occasionally adding a word of praise for the work or for his own

composition thereof. It is the ending verse of the first chapter (ID 16) that is noteworthy in the present context. The author says there that he has 'orally' explained the topic of groundwater currents following 'the sage'. He has preferred, however, not to mention the sage's name. One can guess that in all probability he is referring here to Varahamihira, whom he follows very closely. Alternately this must be a reference to the author's guru from whom he learnt the secrets of the science handed down by tradition. One may also reasonably guess that the author belongs to a period when the tradition of passing knowledge of various subjects orally to the disciples was still in vogue and the practice of disciples giving a formal written form to what they orally learned from their gurus was also common.

In Verse ID 1, the author specifically mentions the name of Varaha (Varahamihira, the author of *Bṛhat Samhita*). Yet another person that the author mentions by name in the text is Sarangadhara (14<sup>th</sup> century), the author of *Sarangadharapaddhati* and some works on Ayurveda like *Sarangadharasamhita* (Majumdar, 1935).

Chapters III and IV dealing with plantation refer to several varieties of trees and plants. *Ashota* (*Solanum erianthum*), *pista* (*Pistacia vera*), *hadama* (*Prunus amygdalus*), *kharika* (*Phoenix dactylifera*), *methi* (*Trigonella foenum-graecum*), *sevati* (*Rosa alba*), and *seva* (*Malus pumila*) (III-32) are words of non-Sanskrit origin and are obviously borrowed from vernacular languages. This suggests a period when vernacular languages were developed enough to influence Sanskrit compositions.

These hints strengthen or at least do not contradict the fact that the author was a contemporary of king Rana Pratap.

## Locale

Regarding the area to which this 16<sup>th</sup> century author belonged, the text provides clear indications. In the opening verse, the author states that he composed the present text to provide the readers with the knowledge of availability of water and also of plantations of trees, as the latter is entirely dependent on the former. In the following verse, too, the author specifies his approach to the topic of water availability. In other works on the same subject, authors deal with this topic towards the end or after discussing seasons and availability of rainwater in the specific region. Chakrapani is silent on these topics and straight away approaches the subject of groundwater at the very outset. This suggests that water was the primary concern of the author and that he belonged to an area where there were scanty rains and plantation necessarily depended on groundwater. The detailed instructions on constructing wells, ponds, lakes, etc., in the second chapter also suggest that the author belonged to a region that faced acute scarcity of rainwater or river water and had to depend solely on manmade water reservoirs as those in Rajasthan. The information on detecting water in the semi-arid and arid regions of Rajasthan could be useful for other areas with similar agroclimatic regions in India.

In Verse IA 4, the author explains why he dealt with the topic of groundwater currents in the way he did. Including deserts and mountainous regions in addition to the usual arid, wet, and ordinary land-divisions for tracing water currents, is the noticeable point where the author deviates from the accepted pattern. This difference in his approach, according to him, is because the king made a specific request to him to trace groundwater in mountainous regions, as also in deserts. Obviously the king who made such a request was one who ruled a land comprising of mountains and deserts and felt some urgency to bring deserts and hillocks under plantation.

History has it on records that Maharana Pratap had fought his battles with the Mughal ruler Akbar, and his officers, taking shelter in the hilly regions of the Aravalli ranges. He had forbidden farming on level lands and had ordered his farmers to cultivate only hilly regions for providing food to his army and preventing Akbar's army from having an access to the same. It also prevented the Mughals from looting and destroying crops. These circumstances could have prompted the king's specific request.

In Chapter II where the author discusses digging of wells and other water reservoirs, there is a reference to breaking hard rocks that interfered with digging. The area to which the author belonged must be one where negotiating such hard rocky terrain was a specific need. The Aravalli ranges of Rajasthan are among the oldest on the earth and the rock formations therein, one of the toughest.

Chakrapani does not show as much enthusiasm as Surapala does, in treating the topic of pleasure gardens and garden houses. Nor does he discuss in his work as many flower yielding varieties of plants and creepers; but he does not forget to include instructions on making provision for palaces for royal pleasure, while constructing lakes (II-11) This again suggests that water-bodies, in preference to gardens, were considered more pleasurable in the region where the author belonged. Even today Rajasthan is known for its lake palaces.

The discussion above provides sufficient internal evidence to confirm the fact that Chakrapani was a contemporary of Maharana Pratap and flourished under his patronage in the last quarter of the sixteenth century in Mewar.

### **Salient features**

Besides those features incidentally brought out in the foregoing passages, other salient features of this text are discussed.

The first chapter offers varied and interesting information about natural vegetation, topography, soil variations, rock structures and variety of rocks, water availability, animals and insects, conditions of deserts and hilly lands and so on. An interesting geological feature like hot smoke emerging out after digging the ground to a depth of about 14 feet is mentioned in IA 22. In fact, the entire first chapter offers interesting information for topographical and geological study.

The author states that there are nine main groundwater currents gushing into nine directions. The one that gushes upwards is the strongest (IA 5). He also states that the origin of these currents is either in a mountain or at the root of a tree (IA 6).

In other works on the subject, authors generally describe surface indications for groundwater, classifying land into three categories, i.e., arid, wet, and ordinary, to suggest existence of water currents beneath those surfaces. Chakrapani approaches the topic in a different manner. He divides land first into two categories, i.e., level land and mountainous area following the footsteps of 'ancient' writers only. He subdivides level land further into arid, desert, wet, and ordinary and subdivides the mountainous land too, further into arid and wet. He deals elaborately with arid and desert types of level land and very briefly with wetland. Ordinary land is just mentioned by name, as according to him there is no difficulty in spotting groundwater, which is available in it almost everywhere. In case of the mountainous land he treats both the subdivisions, viz., arid and wet quite elaborately. It must be noted here, however, that Chakrapani takes this land division into account only for the purpose of tracing groundwater. At all other places (e.g. III 1) he follows the same threefold division as others do.

- In Verse IE 14 he gives a sort of a conversion formula to 'hyperlink' the water depth in level land with that in mountains.
- In the second chapter the author describes several types of lakes, wells, ponds, etc., giving many detailed

instructions for constructing them Surapala is silent on this topic. There is also an interesting section here, consisting of fourteen verses (II 22 to 35), that refers to hard rocks coming in the way while digging wells, etc., which needed to be cut with extra sharp iron tools. The author also offers advice for preventing the tools from bending or blunting in the process. Surapala's work does not contain this information.

Verses 7 to 10 of the same chapter contain instructions for construction of huge lakes at low costs by constructing bunds. Although the verses are intended for instructions on lakes, the contents almost suggest a blueprint for construction of dams.

The author seems to have some reservations on the use of animal flesh, blood, etc., in the recipes for nourishment of plants and also in the remedial measures for their diseases. Occasionally one does come across references to bones, marrow, etc., of different animals but cow's flesh or bone is not recommended. In spite of these reservations, the author offers instructions for preparing *kunapa* (a liquid manure prepared from flesh, marrow, and blood of several animals) and unhesitatingly recommends its use for the healthy growth of all varieties of plants (VII 2, 3). This reflects either on the inevitability of the use of *kunapa* for plants or on the rational approach of the author to his subject.

Compared to other works on ancient Indian agriculture and allied subjects, the astrological content in Vishvavallabha is conspicuous by its absence. In spite

of his having authored a book like Muhurtamala, Chakrapani desists from recommending any auspicious days, stars, etc., for starting an activity related to plantation. Neither do we find reference to good or bad omens anywhere in the text. This too, may be regarded as a proof for the author's logical rational approach and scientific attitude. It is only rarely (VII 35, VIII 44) that he recommends some kind of esoteric remedies for growth or disease of a tree. Otherwise even while recommending a mantra to get rid of pests like rats, etc., he advises remedies like getting rid of rat holes and medicines for destroying the pests alongside (VI 3).

The author of this text, unlike others on similar subjects, does not directly advise people to take to plantation of trees by elaborating on the merits and usefulness of trees to mankind. No portion of the text is specifically devoted to glorification of trees. The only exception to this is found when he states that gardens should be laid out in the interest of both the worlds. (III 6)

The work does not refer to the social side of agriculture or plantation, as is the case with other similar texts like Kashyapīyākṛishusukṛi (Ayachit, 2002). The author does not say anywhere in the text that taking up plantation, constructing water reservoirs, providing healthy seeds or stalks for plantation, etc., come under activities of social welfare which the king must pursue in the interest of the subjects.

Thus, nowhere in his text on plant life, Chakrapani directly advises kings on their duties and responsibilities or people



on merits of trees, etc., the subject itself is his primary and sole concern and he has not allowed his mind to divert or deviate from it. Only once (IB 1) he has shown a direct concern for the residents of deserts who, he believes, could have a permanent source of happiness if they were to be educated on how to locate water currents of the size of an elephant's trunk concealed beneath the dry stretches of deserts.

Planting trees inside the forts is yet another new topic that Chakrapani treats with considerable detail (III 28 to 32)

The author makes a passing reference to plants brought from foreign lands but discourages their plantation, as he firmly believes that they cannot survive on alien soil and climate (VIII 7, 8). However, he also knows that if destiny favors, if the rulers and the wealthy offer help and support and if special efforts are put in, a tree can grow in any surroundings. (III 12) Similar thought was expressed by Surapala (Sadhale, 1996).

Chakrapani's treatment of plant disorders is based on the *tridosha* theory like that of Surapala. In fact, Vrikshayurveda (science of plant life), and Ayurveda (science of life), e.g., Hastyayurveda (science of elephant life) and Ashvayurveda (science of horse life) are all branches of one major science, i.e., Ayurveda (science of life). This explains why the experts of Vrikshayurveda like Surapala were often reputed physicians too. The principles underlying the diagnosis and treatment are common to all. According to the

*tridosha* theory, disease is imbalance of the three humors and health is the balance thereof. In addition, the fundamental concept of life that the entire creation including humans, animals, and plants are modifications of the five elements, viz., ether, wind, fire, water, and earth automatically establishes a natural, inbuilt ecological link among living beings, plants, their food substances, the three humors, the diseases and the corrective measures. This is why the diseases of trees, animals, humans, etc., and their treatment are essentially the same in many respects.

While stating his prescriptions for protection and treatment of plants, Chakrapani repeatedly says that while other works on similar subjects deal with several prescriptions, he has restricted himself only to those, which have been actually experimented and have yielded results (VIII 78). This shows that in this work he has paid attention not only to the theory but also to the practice of the science of plant life. He also warns that only the experts should practice the remedial prescriptions after using their discretion.

Chakrapani has allowed freedom and flexibility to scholars and planters by advising them to learn from their own observations (IE 15), to use their own reason and discretion as per changes in place and time (VIII 8), to consult local people (VII 45), to take their clues from other texts on the science and from the traditions (IX 51). He thus suggests a path of future development of an applied science like Vrikshayurveda.

## The manuscript

A photocopy of the manuscript was procured from Jodhpur (Rajasthan Prachya Vidya Pratishthan) bearing number 5861-22 and title 'Vishvavallabhapatra' (A manuscript of Vishvavallabha). One Lakshminarayana has copied this manuscript in Vikramsamvat 1925, corresponding to shaka 1790. This corresponds with the year 1846-1847 of the Gregorian calendar. Thus the scribe has prepared this copy approximately two hundred and fifty years after its composition. In the colophon to the work the scribe states that he copied this work so that one Shri Bhaktavar could read it. Nothing is known about Bhaktavar or the source text of the scribe. The manuscript in hand contains many blank spaces indicating that the source text/copy itself had those lapses or that the respective portions were badly or illegibly written in it. The script contains several textual and metrical defects too. For most of these, too, either the scribe of the source copy and/or that of the present script were responsible. Many of such clerical errors can be corrected by guess and the context. The manuscript is neatly written in a uniform, legible hand in Devanagari script in a style current in the 19<sup>th</sup> century. The style of writing or joining some letters is different from that of the current Devanagari. The text comprises of twenty-one pages with thirteen lines on each. Though the form is metrical, it is written in a continuous style like prose without leaving any space between two verses or even between two chapters, for that matter. If not with ease and fluency, the text can still be read with patience and persistence.

## The composition

Following the set pattern, Chakrapani has composed this work in a systematic manner by neatly dividing the topics of the subject into nine chapters. Each chapter is devoted to that single topic and this is scrupulously followed although chapters dealing with some topics are too short due to the limited content.

Rarely, the same number is repeated for two consecutive verses and occasionally a verse is not numbered at all. Topics of longer chapters (I, VIII, IX) are further subdivided into smaller sub-topics maintaining continuity in the numbering of verses. The first chapter is the only exception to this. In this, verses in each subtopic are independently numbered. The composition in this chapter is not as compact as in other chapters.

The entire composition is in verse form except the subtopics, which are designated in prose. The writer has very good command on longer meters like Sragdhara, Shardulavikridita, Prithvi, and Mandakranta, which he has frequently used throughout the composition and with special preference in the first chapter. The medium size meters like Indravajra, Upendravajra, Upajati, and Malini are also used intermittently. Comparatively Anushtubh, the common choice of Sanskrit writers, especially in non-literary compositions, is used less frequently. No rule regarding the chapter-wise or topic-wise use of meters is observed. Generally, the choice of meter of every verse is determined by the contents. In spite of choosing the metrical form for a technical subject the composition is on the whole easy and simple. Complicated and

involved constructions are exceptional. Occasionally the writer has used simple compounds. In the first chapter he has liberally used code words for indicating numbers but as the conventions are widely understood, they should not be considered as obstructions to the comprehension of meaning. This being a work on science the writer's main focus is on clarity and precision in expression. We do not find here any poetic flourishes in language. Few Sanskrit writers have resisted the temptation of displaying their poetic abilities; even in non-literary compositions as Sanskrit language itself by nature is most adaptable to grandiose of style and expression. Chakrapani uses direct and simple language, which he

is not willing to sacrifice for imposing style or striking expression. The language has, however, its own dignity and maturity.

Like poetry, the writer keeps emotion, too, outside the scope of his composition. When a tree does not respond to any treatment it must be transplanted. The author states this in a matter-of-fact manner. It is interesting to compare him with Surapala, the author of Vrikshayurveda, in this regard. The latter advises planters to establish a sort of emotional rapport and communication with the tree to be transplanted to reduce the impact of transplantation (Verses 85 and 86).

**Table. Topics covered in Chakrapani's text**

Chapter No. <sup>1</sup>	Topic	No. of Verses
IA	Groundwater	22
IB	"	12
IC	"	5
ID	"	2
IE	"	16
		57 Total
II	Water reservoirs	39
III	Examination and suitability of ground	35
IV	Propagation and plantation	23
V	Water management	6
VI	Protection and care	9
VII	Nourishment and growth	46
VIII	Diseases and treatment	79
IX	Botanical wonders	52
Total		346 Grand Total

<sup>1</sup> Chapter I has five sections.

Brevity and terseness are yet other traits of this composition. As water availability in ordinary or wetland does not pose any difficulty, the writer deals with those topics very briefly in the first chapter (ID 5). He is very conscious of not extending the size of the text unnecessarily (IA 22).

The author has described his own composition as one that would be a source of delight to the learned (IX 52). After going through the text one is inclined to agree with him, as the claim seems more than justified.

### A note on the typed text of Vishvavallabha

The manuscript written in the year 1846—47 poses the following difficulties for common readers:

- It is written in the script of Devanagari as was current about 150 years ago.
- Writing of certain characters like 't' as in *katu*, 'dh' as in *dridhi*, etc., is entirely different from their present-day form while that of other consonants like k, r, is also slightly different.
- Many characters which closely resemble each other, like y and p, bh and m, t and n are not clearly and uniformly distinguished from each other.
- Style of writing conjunct consonants considerably differs from that of the present-day script.
- The rules of writing nasal consonants, *anuswaras* (nasal sign) and *avagraha* (the sign similar to the

letter's' in English) in coalition of letters are not necessarily observed as they are in a standard Sanskrit text.

- Words, lines, verses, topics and chapters are not properly dissociated as they are today, since in the old handwritten manuscript style, alignment on both left and right was the first and the foremost requirement of a manuscript.
- Due to these above-stated factors, those who have a fairly good knowledge of Sanskrit, along with its grammar and prosody and have read handwritten Sanskrit manuscripts before can read the text but for others it may be a little difficult.
- An attempt therefore has been made to remove these obstacles in the typed script to the extent possible, trying at the same time to be faithful to the text.
- It can be said that barring the limitations of the font, the text is rewritten in the present-day Devanagiri script.
- It is hoped that those readers who wish to refer the contents of the English translation back to the Sanskrit text will be able to do so with the help of this typed text, simplified up to an extent.

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# Commentary

Y L Nene<sup>1</sup>

There is substantial evidence to identify the author of Vishvavallabha, Chakrapani Mishra, (henceforth referred to as Chakrapani) as a scholar attached to the court of Maharana Pratap (1540—1597 AD) of Mewar (Udaipur) of Rajasthan in India. An account of his scholarship has been given by Dr Nalini Sadhale elsewhere in this publication. Chakrapani's classic, Vishvavallabha, deals with various aspects of agriculture with a focus on the Mewar region of Rajasthan, which probably include adjacent areas of the present-day Gujarat and Madhya Pradesh. The following topics relate well to the Mewar region: (1) detection of groundwater in arid, semi-arid, and moist regions, and hills; (2) construction of water reservoirs; (3) kinds of soils; and (4) crops to be grown.

## Detection of groundwater (I A–E)<sup>2</sup>

The detailed understanding about detection of groundwater based on several criteria clearly points to the increased knowledge-base since the times of Varahamihira (505—587 AD), who lived in the adjacent

Malwa region of Madhya Pradesh, Surapala (c 1000 AD) who lived in eastern India, and Sarangadhara (13<sup>th</sup> century AD) of Bundelkhand in northeast Madhya Pradesh. It is clear that Chakrapani had access to the information that had existed prior to his time. His reference to the existence of underground artesian well (IA 5) is indicative of detailed observations.

Groundwater in semi-arid, arid, wet, and hilly areas (IA, IB, IC, ID, IE). In all, 57 verses include information on different indicators for the presence of groundwater

Rocks of different colors and structures have been mentioned as indicators. These are golden (IA 8) *parpata* (layered rock?) (IA 7, 8), pigeon colored (bluish gray) (IA 11), white (IA 13), reddish (IA 15), *putaka* (?) (IA 16), dusty colored (brown) (IA 18), purple (IE 9), lapis lazuli (IE 9), pearly white (IE 9), smoky (IE 9), and silky white (IE 10).

The entire rock system of the hills of Mewar belongs to the metamorphic series of Archaean rocks. Common metamorphic rock types are: schists (green, blue, mica,

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2. Verse nos. are given in parentheses.

graphite, etc), slate and gneiss, marble, and others. Rocks that Chakrapani associated with groundwater must be of the metamorphic series.

Soil colors and types associated with the presence of water are white sand (IA 9, 10), iron-colored (reddish brown) (IA 9, 14), white (IA 9, 12, 13; IB 5), yellow sand (IA 10), brown (IA 12), whitish-red sand (IA 12), smoky (IA 15), black (IA 16, 17, 18), yellow (IA 19, IB 8), sandy blue or sandy black (IE 11), sandy copper (IE 12).

Soil types of Mewar and adjacent regions have been classified by soil scientists today as mixed red and black, red, red and yellow, gray brown, medium black, and alluvial. Soil types mentioned in Vishnavallabha match those that we know today. "White soils" mentioned in the text could be due to subsoil deposits of calcium carbonate.

Fauna associated with groundwater, according to Chakrapani, include termitaria (IA 11 to 19, IB 2 to 4, 7 to 10); mosquitoes (IC 1); earthworms (IB 3), scorpions (IB 5), frogs (IA 9, 13, 16; IB 3), alligators (IA 10), tortoises (IA 18), and snakes (IA 15, 16, 19, IB 10, 12).

It is clear that presence of termitaria visible above soil surface and presence of frogs and snakes below the underground were frequently used indicators of the presence of water. This is logical. Presence of other fauna may also be useful but not a reliable indicator of the presence of groundwater. Indication of the presence of hot springs is noteworthy (IA 22).

Vegetation offered excellent indication of the existence of subsoil water. Numerous species of plants were associated with the quantity, quality and depth of groundwater. Here is a summary.

In semi-arid regions (IA) *arjuna* (*Terminalia arjuna*) (10), *ashmantaka* (*Bauhinia variegata*) (18), *astadala* (?) (20), *badari* (*Ziziphus mauritiana*) (11, 18), *bharngi* (*Clerodendrum indicum*) (20), *bilva* (*Aegle marmelos*) (13), *danti* (*Baliospermum montanum*) (20), *durva* (*Cynodon dactylon*) (17), *haridra* (*Adina cordifolia*) (19), *jambu* (*Syzgium cumini*) (11), *kakodumbarika* (*Ficus hispida*) (13), *kali* (*Holarrhena antidysenterica*) (14), *kampilla* (*Mallotus philippensis*) (14), *kapittha* (*Limonia acidissima*) (16), *karanja* (*Pongamia pinnata*) (15), *karnikara* (*Pterospermum acerifolium*) (21), *kharjuri* (*Phoenix dactylifera*) (21), *kola* (*Ziziphus mauritiana*) (12, 21), *kusha* (*Desmodium bipinnata*) (17), *lakshmana* (*Ipomoea septaria*) (20), *madhuka* (*Madhuca indica*) (15), *nalikera* (*Cocos nucifera*) (17), *navamallika* (*Jasminum arborescens*) (20), *palasha* (*Butea monosperma*) (12, 21), *rudanti* (*Capparis grandis*) (20), *shona* (*Oroxylum indicum*) (14), *sinduvra* (*Vitex negundo*) (12), *tala* (*Borassus flabellifer*) (17), *tilaka* (*Wendlandia exserta*) (17), *trivrit* (*Operculina turpethum*) (20), *udumbarika* (*Ficus glomerata*) (9, 13), *vetasa* (*Calamus rotang*) (8).

In arid regions (IB): *badara* (*Ziziphus mauritiana*) (5), *bilva* (*Aegle marmelos*) (6), *durva* (*Cynodon dactylon*) (7), *indva* (*Citrullus colocynthis*) (4), *kakubha* (*Terminalia arjuna*) (6), *karra* (*Capparis desudua*) (2), *karkandhu*

(*Ziziphus mauritiana*) (6), *kusha* (*Desmostachya bipinnata*) (7), *mahanimba* (*Melia azadarach*) (11), *neepa* (*Anthocephalus cadamba* or *Barringtonia racemosa*) (10, 12), *nimba* (*Azadirachta indica*) (9), *palasha* (*Butea monosperma*) (8), *pilu* (*Salvadora persica*) (3, 5, 6), *rohita* (*Tecomella undulata*) (2, 5, 8, 9), *shama* (*Prosopis* sp.) (10), *shami* (*Prosopis cineraria*) (8), *shimpa* (*Dalbergia sissoo*) (12).

Trees such as *rohita* (*Tecomella undulata*) and *pilu* (*Salvadora persica*) have been mentioned more often than others. Both these trees are seen in arid regions of India.

In wetlands (1C) *alindala* (?) (3), *ashuvega* (?) (2), *brahmi* (*Bacopa monnieri*) (3), *danti* (*Bahospermum montanum*) (2), *edukirva* (?) (3), *garuda* (?) (2), *gundraka* (*Typha australis*) (3), *jyotishmati* (*Cardiospermum halicacabum*) (2), *kokilasva* (*Hygophila auriculata*) (3), *lakshmana* (*Ipomoea sepiaria* ?) (3), *marshacchada* (*Vigna* sp.) (3), *mashuparni* (*Teramnus labiales* ?) (2), *nala* (*Phagnomites karka*) (3), *pindaraka* (*Trewia nudiflora* ?) (3), *rudanti* (*Capparis grandis* and *C. sepiaria*) (2), *sharivakha* (*Hemidesmus indicus*) (3), *shiva* (*Prosopis cineraria*) (2), *shyama* (*Ichnocarpus frutescens*) (2), *trivrita* (*Opeculina turpethum*) (2), *varahi* (*Dioscorea bulbifera*) (2), *virana* (*Vetiveria zizanioides*) (1), *viaghrapadi* (*Flacourtia indica*) (2).

We can recognize many of these species to be moisture loving and therefore observation by Chakrapani stands confirmed.

In hilly regions (IE) *arjuna* (*Terminalia arjuna*) (13), *audumbari* (*Ficus glomerata*) (2), *bibhitaka* (*Terminalia bellirica*) (4), *byapura* (*Citrus medica*) (5), *bilva* (*Aegle marmelos*) (13), *bodhi* (*Ficus religiosa*) (2), *champaka* (*Michelia champaca*) (5), *dadimi* (*Punica granatum*) (5), *dhava* (*Anogeissus latifolia*) (13), *dhurva* (*Cynodon dactylon*) (14), *jambu* (*Syzygium cumini*) (4, 14), *kharjuri* (*Phoenix dactylifera*) (4), *kubjaka* (*Rosa brunoni*) (5), *kusha* (*Desmostachya bipinnata*) (14), *kutaja* (*Wrightia tinctoria*) (14), *mahanimba* (*Melia azadarach*) (14), *naktamala* (*Cassia fistula*) (4), *nalikera* (*Cocos nucifera*) (6), *neepa* (*Anthocephalus cadamba* or *Barringtonia racemosa*) (4), *nimbaka* (*Citrus limon*) (5), *nyagrodha* (*Ficus benghalensis*) (2), *palasha* (*Butea monosperma*) (2), *partha* (*Terminalia arjuna*) (13), *pichu* (*Azadirachta indica*) (14), *pilu* (*Salvadora persica*) (14), *surja* (*Vateria indica*) (14), *shaka* (*Tectona grandis*) (13), *shatapatti* (*Rosa centifolia*) (4), *shimshapa* (*Dalbergia sissoo*) (13), *shriparni* (*Gmelina arborea*) (13), *sinduvara* (*Vitex negundo*) (4), *tala* (*Borassus flabellifer*) (6), *udumbarika* (*Ficus glomerata*) (2), *vata* (*Ficus benghalensis*) (4), *vetasa* (*Calamus rotang*) (6).

Most of these plant species are known to be deep rooted and therefore should indicate presence of groundwater.

Contents of verse IE 2 need to be noted. Existence of plenty of water in mountains, not too deep, has been mentioned if a combination of *bodhi* (*Ficus religiosa*), *udumbarika* (*Ficus glomerata*), *palasha* (*Butea monosperma*), and *nyagrodha* (*Ficus benghalensis*) are seen at a location. On the contrary trees such as *arjuna*



(*Terminalia arjuna*), *bilva* (*Aegle marmelos*), *shumshapa* (*Dalbergia sissoo*), and *dhava* (*Anogeissus latifolia*) indicate absence of water (IE 13).

The ecology of the Mewar region of Rajasthan has undergone substantial changes since the time Vishvavallabha was written. However, many of the criteria of detecting groundwater may still be useful in pockets where ecology has not changed significantly.

At a time in history when the technological advances that we see today had not occurred, many of the criteria given in Vishvavallabha must have been most useful in saving the wastage of manual labor that was required for digging wells.

### Construction of water reservoirs (II 1–39)

The technology required for the construction of water reservoirs was most advanced in South Asia. This is evident from the texts such as Kashyapiyakrishisukti (c. 800 AD) (Ayachit, 2002).

The technology extended to all regions of the Indian subcontinent and it was very vital for the arid and semi arid Rajasthan to construct water reservoirs.

The verses describe construction of lakes for villages and pleasure resorts for kings, ponds, wells, and potholes. Besides, some verses explain the techniques for breaking rocks and for preventing damage to implements

There is reference to different shapes of lakes (II 4). To qualify for a good lake its length should be over

1800 m (II 6). A dam constructed between two hills can give rise to a large lake (II 7, 8). Use of mortar in strengthening the bunds of dams is indicated (II 9). Pleasure resorts for kings were constructed in the middle of lakes or on the banks (II 11). Four types of ponds with specific names, viz., *nanda*, *bhadra*, *jaya*, and *vijaya* (II 12) were recommended. Seven kinds of wells have been mentioned, viz., *vijaya*, *dundhubi*, *chudamani*, *bhadra*, *jaya*, *nanda*, and *shankar*. *Vijaya* is the smallest (approx. 73 m diameter) and all other kinds are larger, each by 150 cm in the order mentioned above (II 15). Potholes, where rainwater accumulated naturally were of four kinds, viz., *bhadra*, *subhadra*, *parighra*, and *nanda* (II 19). Deepening these potholes to increase water harvesting and strengthening the bunds around with stones and mortar was suggested (II 21). **Worth noting is the verse II 18 wherein Chakrapani states that water of a well located in an inauspicious portion of the land can be used for irrigation; it would not lead to misfortune. A rational attitude indeed!**

Since water from wells was used for drinking, techniques to keep water safe using herbs and other materials were followed. Even brackish, foul, and turbid water was treated (II 36, 37, 38). For treating brackish water *khadira* (*Acacia catechu*) bark, coconut and chalk powder, were used (II 36, 37) for treating foul and turbid water, powders of dried *kakubha* (*Terminalia arjuna*), *musta* (*Cyperus rotundus*), *ushira* (*Vetiveria zizanioides*), and *kanakaphala* (*Commiphora wightii*) and fruits of *dhatri* (*Emblia officinalis*), *kataka*

(*Strychnos potatorum*), *loha* (*Aquilaria malaccensis*), and *rajadana* (*Manilkara hexandra*) were used. For turbidity alone *palashabhasma* (ash prepared by burning the wood of *Butea monosperma*) was recommended.

It may be pointed out that Surapala (c. 1000 AD) had recommended, for treating water in wells, *ushura*, *mushta*, *dhatri* (*amlaka*), and *kataka* in addition to *anjana* (*Hardwickia binata*), *naga* (*Mesua ferrea*), and *kosataka* (*Luffa acutangula* or *L. aegyptiaca*). Brihat Samhita by Varahamihira (Bhat, 1981) mentions materials such as antimony and the powder of *bhadramushta* (*Cyperus rotundus*) bulbs, *rajakoshataka* (*Luffa acutangula*), *amalaka*, and *kataka* fruits, for purifying well water. Thus we see that almost the same herbs had been used for improving drinking quality of water from 6<sup>th</sup> to 16<sup>th</sup> century AD, and villagers even today use some of the herbs.

Another aspect covered in this chapter is that of breaking rocks. To reduce the manual work, principle of expansion by heat and sudden contraction by cooling with water was adopted intelligently to break rocks (II 25 to 31). Adjuncts were used with water mixed with leaves of trees, fermented gruel, acid water mixed with grass, raw sugar, natron (native sodium carbonate), turmeric, long pepper, mustard oil, ashes, cow urine, etc., the import of all these adjuncts is not clear. However, tree leaves in water could reduce the splash from the heated rocks. A good deal of this information apparently was taken from Brihat Samhita of Varahamihira (Bhat, 1981).

Tools were used to bring rocks to desired shapes and sizes (II 32 to 35). To protect tools from blunting, the metallic portion was treated with materials such as buttermilk, oil, raw sugar, liquor, ash from barley or *kadali*, latex from *arka*, and mixture of *ankola* oil and water. It is worth researching this information.

### Soil and plant propagation (III 1–35).

In verses III 1 to 6, Chakrapani has apparently taken information on soil types, color and taste from Surapala's Vrikshayurveda. In verses III 7 through 19, the author again repeats information given by Surapala, except that names of a few more plant species which gave useful products such as fruits, flowers, and medicines are also mentioned.

Verses III 20 to 27 list a number of small and large trees that were not recommended for planting near a residence. The ground rule was to grow only those species, which give useful products such as fruits, flowers, and medicines.

A unique section is on plantation inside a fort (III 28–32). Forts were key locations for the defence of a kingdom as well as the ruler. For the needs of soldiers, it was necessary to erect required infrastructure. This included growing plant species, especially trees of economic importance and flowering shrubs. There is no specific reference to plantations in forts in any of the ancient and medieval texts translated so far.

## Planting (IV 1–23)

There is interesting information in this chapter too. Trees that can be grown in a rocky terrain are: *udumbari*, *tinduka*, *vira*, *chuncha*, *vata*, *rajadana*, *champak*, *vamsha*, *jambu*, and *pichu*. In soils mixed with mica (these exist in Rajasthan), *rajadana*, *bakula*, and *champak* will not grow.

Verse 8 suggests that for developing a good garden the land should not be under ripe grass, *mash* (*Vigna mungo*), and *tila* (*Sesamum indicum*). This probably was because of the grain shattering varieties of grasses, *mash*, and *tila*, which could create a continuing weed problem. In the same verse planting of *ajagandha* (*Cleome gynandra*) and *shatapushpi* (*Anethum sowa*) to repel termites was recommended.

As in Surapala's *Vrikshayurveda*, Chakrapani also mentions (IV 9) making pits for planting trees/shrubs and heating them by fire. While Surapala mentions placing cow bones and cow dung for burning, Chakrapani avoids mentioning bones. The latter simply states that the pits should be heated, filled with soil, and then sown with seed traced with dry cow dung, ghee, honey, and ashes of sesame plants (IV 10).

It is necessary to discuss the "heating" of the pit. Why was this recommendation made since Surapala's time (c. 1000 AD)? There must have been a realization that entities or factors, not visible, but affecting the health of newly planted trees/shrubs must exist and burning organic matter in the pit would eliminate

them. It can be conjectured that the existence of soil borne disease causing entities was suspected. Smearing all parts of the transplanted saplings with cow dung was obviously done to protect them from any injury or affliction of biotic origin.

## Protection of saplings (VI 1–9)

By and large the contents of this chapter are similar to those in Surapala's *Vrikshayurveda*. However, we see a few additional points. For example, injury to trees by smoke was recognized by Chakrapani, and he suggested planting trees at a safe distance from source of fire (VI 1–3). This must be one of the early records of polluted air adversely affecting trees. While Surapala depended on mantra for saving plants from damage by rats, Chakrapani suggested both destruction of rat holes as well as writing mantra on a leaf and burying it (VI 3, 4).

An interesting recommendation has been made to control insect pests in young plantings, i.e., to plant *shatapushpa* (*Anethum sowa*) and *kuberakshi* (*Caesalpinia crista*) densely between tree rows. This is in addition to planting *ajagandha* (*Cleome gynandra*) to repel termites as mentioned earlier (VI 8).

## Nourishment (VII 1–46)

It seems Chakrapani was somewhat averse to recommending *kunpa* (liquid manure), the constituents of which since the time of Surapala (c. 1000 AD) included

animal bones, flesh, and blood besides other constituents. Vegetarianism (I would like to coin a new word "Vegedarianism" to include plants and dairy products which the so-called vegetarians of India consume) was most prevalent in western India by the time of Chakrapani and that may be the reason for his aversion. Even today Rajasthan and Gujarat have a high percentage of 'vegедarian' population. However, the animal wastes are vital ingredients of *kunapa*, and therefore Chakrapani could not do away with it. In verse 25, Chakrapani suggests a gruel prepared by fermenting *karkandhu* (*Ziziphus mauritiana*), *methi* (*Trigonella foenum-graecum*), *tila* (*Sesamum indicum*), *rodhra* (*Symplocos racemosa*), and curd/buttermilk to induce early flowering. This seems to be an attempt towards a 'vegедarian' *kunapa*. In contrast, Chakrapani seems to have less hesitation in recommending animal wastes in the verses of chapter IX, Wonders of seeds.

Materials recommended for nourishment were similar to those recommended by Surapala but with some modifications. These included milk, ash from *chara* (*Buchanania lanzan*) washings from rice, powdered mustard (yellow?), white mustard, sesame, oilcakes, fish (meal), ghee, *triphala*, decoction of horse gram (*kulath*), flour, decoction of cotton (*karpasi*) seed, cattle dung, soaked black gram (*masha*), cock droppings, mixture of several plants in ghee (VII 17 to 19, 21, 34, 40, 44), honey, raw sugar, liquor, barley, *bidanga* (*Embelia ribes*), and a few others. Of course *kunapa* figures in at least 10 verses.

## Disorders and treatments (VIII 1-79)

Again Chakrapani has followed texts of Surapala and Sarangadhara (Majumdar, 1935) but with some additions. For example, several new herbs have been mentioned for the control of disorders. Such plant species are *ambu*, *aragvadha*, *arishta*, *ingudi*, *karanja*, *katphala*, *katvanga*, *kuberakshi*, *nimba* bark, *rohita*, *shatapushpa*, *tagara*, *vasa* and others.

Of these *karanja* (*Pongamia pinnata*), *nimba* (*Azadirachta indica*), *shatapushpa* (*Anethum sowa*), and *vasa* (*Adhatoda vasica*) are of interest today especially to entomologists. This must be one of the oldest documented references on the use of these species for insecticidal and antimicrobial properties. It is also worth noting that insecticidal herbs were mixed in cow urine before use (VIII 39, 40). Only recently Khanuja *et al* (2003) patented cow urine distillate in powder form as "bioenhancer" that improves absorption of chemicals in the living systems. It is logical therefore to conclude that mixing herbs in cow urine must have improved their insecticidal properties.

A list of materials recommended for the control of disorders has been given in Table 1.

Chakrapani follows Surapala in classifying (internal) disorders based on the imbalance of humors such as *vata*, *pitta*, and *kafa*. In Table 2, a comparison of symptoms associated with the imbalance of these three humors or *doshas* as described by Surapala, Sarangadhara,

and Chakrapani has been made. The descriptions are similar with minor differences.

Chakrapani again follows Surapala and Sarangadhara and mentions disorders (external) caused by insect induced wounds, scorching heat, frost, lightning, strong wind damage, and excessive watering. However, Chakrapani adds to the list the causes such as transplanting shock, too many birds, corrosive, acrid, and saline substances, starving, excessive manuring, and overmedication. This information and the addition to the list of herbs clearly points to the increased knowledge-base since the times of Surapala and Sarangadhara.

Significantly Chakrapani points external and internal damage caused by insects. Undoubtedly a reference to borers has been made (VIII 37). Also his observation that insect pests move to trees/plants from soil, water, and a specific manure is important.

Use of neem bark for fumigation (VIII 43) is an early indicator of the recognition of neem's insecticidal properties. We note in the verse VIII 45 the principle of trap cropping.

**Another highly significant recommendation is made in verses (VIII) 60 to 61. This is to remove a diseased tree in the midst of healthy trees and changing soil for the diseased tree, if young. In my opinion, this is a strong indication of the knowledge that disorders could be contagious or infectious. Recommendation to change soil is supportive to the opinion.**

## Wonders of seeds (IX 1–52)

The chapter has verses that describe prescriptions to obtain unexpected results. Such prescriptions include (i) enlarging fruit size by soaking seeds of *kushmanda* (*Bemuncasa hispida*), *vartaka* (*Solanum melongena*), and *patolaka* (*Trichosanthes cucumerina*) in hog's marrow (IX 6), (ii) enlarging *vartaka* fruit size by treating its seed with honey and ghee and then incubating it in a growing *kushmanda* fruit (IX 7), (iii) producing mango fruits more than once in a year by soaking its seeds in the blood of rabbit and tortoise for 21 days, and then planting them with the sprinkling of milk and water (IX 9), (iv) getting large radishes by sowing seeds in pits in which cow dung and hog bones are burned and then sand is filled (IX 12), (v) making a tree produce flowers all the year round by drenching soil around it with a mixture of dung, *bidanga* (*Embelia ribes*), sugarcane juice and oilcake, (vi) producing dwarf trees by putting barriers in the root zone (IX 14), (vii) producing sweet fruits of banana and grapes (IX 15, 46), (ix) producing desired tree by inserting its seed in another young tree (an unusual graft?) (IX 19), (x) producing a dwarf tree by cutting its trunk and then treating with *kunapa*, salt, honey, ghee, milk, and iron nail (IX 20), (xi) keeping ripened fruits on trees longer (IX 21, 22), (xii) producing fragrant flowers (IX 27, 32, 33, 35, 36), (xiii) changing color of flowers from normally white to golden yellow through soil treatment (IX 31), (xiv) producing seedless fruits (IX 40, 41) (xv) producing colored (blue, red, green, and yellow) cotton (IX 42–45), and (xvi)

producing scented juice from sugarcane (IX 48, 49). Many of these prescriptions are certainly worth-trying.

The Asian Agri-History Foundation has already published English translations with scientific commentaries of Surapala's Vrikshayurveda (Sadhale, 1996) and Dara Shikoh's Nuskha Dar Fanni-Falahat (Razia Akbar, 2000). We can observe two distinct schools on arbori-horticulture. First the Indian knowledge base tracing its development from Atharvaveda through Agnipurana, Brihat Samhita, Surapala's Vrikshayurveda, Upavana-Vinoda to Vishnavallabha, and the other from early Persian and Arab knowledge base leading to Dara Shikoh's compilation. Dara Shikoh included some prescriptions from the Indian school, but depended mostly on the Persian/Arab schools.

Together, Surapala's Vrikshayurveda, Sarangadhara's Upavanavinoda, and Chakrapani Mishra's Vishnavallabha offer us a wealth of prescriptions that could be researched further with the techniques available to us today. Each prescription or a small group of prescriptions could be a thesis topic/topics for research by a postgraduate student in agriculture. It is up to us whether we continue to follow the West all the time or demonstrate originality in research based on our own agri-heritage.

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**Table. Materials recommended for the control of tree disorders and their properties as currently known.**

Material	Verses	Latin names of plants	Properties
<b>Algae</b>	<b>55</b>		Cooling microenvironment; nutrition, anthelmintic
<i>Ambu</i>	11	<i>Pavonia odorata</i>	Antimicrobial
<i>Amla</i> - bark	56	<i>Emblica officinalis</i>	Antimicrobial
<i>Amra</i> - bark	12	<i>Mangifera indica</i>	Antimicrobial.
<i>Amrita</i>	23	<i>Tinospora cordifolia</i>	Antibacterial; antiviral
<i>Ankola</i>	48	<i>Alangium salviifolium</i>	Antifungal; antibacterial; anthelmintic
<i>Ankola</i> - oil	47, 49		
<i>Aragvadha</i>	11	<i>Cassia fistula</i>	Antimicrobial
<i>Aragvadha</i> - bark	39		
<i>Arishita</i>	22	<i>Sapindus emarginatus</i>	Emulsifying property, insecticidal, antibacterial
<i>Arishita</i> - bark	39		
<i>Arjuna</i> - bark	21, 27, 43, 64, 72	<i>Terminalia arjuna</i>	Antibacterial
<i>Asana</i> - seed	15	<i>Pterocarpus marsupium</i>	Antimicrobial, exudes gum
<i>Ashoka</i>	45	<i>Saraca asoca</i>	Antibacterial
<i>Ashvagandha</i>	12, 14	<i>Withania somnifera</i>	Antibacterial, anthelmintic, antiviral; antifungal, insecticidal
<i>Atasi</i>	52	<i>Linum usitatissimum</i>	Soothing effect due to mucilage; oil absorbed by wood
<i>Ativisha</i>	41	<i>Aconitum heterophyllum</i>	Antibacterial, insecticidal
<i>Ayas</i> (iron)	49		Provides iron to trees
<i>Bhaliata(ka)/Bhullota</i>	13, 40, 41, 72	<i>Semecarpus anacardium</i>	Antiseptic, insecticidal, termite repellent; antifungal, antibacterial; fruits also anthelmintic
<i>Bidanga</i>	26, 29, 40, 46, 49, 58, 74, 75	<i>Embelia ribes</i>	Anthelmintic, antibacterial, insecticidal (embelinbenzoquinone)
<i>Bidanga</i> - bark	39, 64		
<i>Cat dung</i>	42		High in Nitrogen (?)
<i>Chara</i> seed	32	<i>Buchanania lanzan</i>	Detoxification (?)

continued

**Table 1. continued**

Material	Verses	Latin names of plants	Properties
Clarified butter (ghee)	18, 26, 30, 33, 34, 42, 44, 46, 48, 56, 59, 64, 65, 68, 72		Saponification after release of fatty acids
Cow dung	46, 48, 58		With urine it is an antiseptic, rich in bacteria which compete with pathogens, good medium for biocontrol agents; beneficial to <i>Rhizobium</i> and <i>Azotobacter</i>
Cow dung - dried	56		Rich in minerals, "anti-insect" properties.
Cow dung - dry powder	59		Contains keratin, a protein that has 24% cystine, a sulfur-containing amino acid; used for smoking (fumigating) trees
Cow dung - ash	50		Glutamate, leucine, and proline make up 40% total amino acids in milk of all animals - mass rearing of <i>Trichogramma</i> ; sticker-spreader, growth promoter(?), induces resistance to leaf curl in chili
Cow horn	41		Antiseptic, bioenhancer
Cow milk	17, 32, 70		Insecticidal (?)
Cow urine	39, 40, 42		Bark contains tannins, produces gum which is emulsifier, stabilizer, and thickener
<i>Dhatura</i> - leaves	73	<i>Datura metel</i>	Rich in protein; releases amino acids including proline, which is known to induce systemic resistance to pathogens and other stress factors
<i>Dhava</i> bark	72	<i>Anogeissus latifolia</i>	Insect repellent (?)
Fish	73		?
Fragrant grasses	74		See cow, dung
<i>Ghana</i> - bark	21	?	See cow urine
Goat's dung	12, 15		
Goat's urine	12		

continued



Table 1. continued

Material	Verses	Latin names of plants	Properties
<i>Guggula</i>	15, 34	<i>Commiphora wightii</i>	Antiseptic
<i>Hingu</i> - bark	43	"	"
Hog dung	42		See cow dung
Hog marrow	50		Contains fats and blood, rich in phosphorus
Honey	18, 26, 28, 29, 30, 33, 46, 48, 51, 52, 54, 56, 59, 68		Antimicrobial; protects wounds in plants and animals, proline present; peptide apidacein in honey is antibacterial
<i>Ingudi</i>	29	<i>Balanites aegyptiaca</i>	Oil antibacterial and antifungal, bark anthelmintic
<i>Ingudi</i> - bark, fruits	44		
Jackal dung	42		Richer in nitrogen than the dung of herbivores and may promote growth of different biocontrol agents
<i>Jambala</i>	18	<i>Citrus aurantium</i> var. <i>bergamia</i>	Rind yields an antiseptic oil
<i>Kamala</i> - bulb	55	<i>Nelumbo nucifera</i>	Mucilage in rhizomes, antifungal, antibacterial
<i>Kana</i>	14	<i>Piper longum</i>	Antibacterial, larvicidal, anthelmintic
<i>Kankata</i> - leaf powder	30	<i>Abutilon indicum</i>	Leaves rich in mucilage
<i>Karanja</i>	41	<i>Pongamia pinnata</i>	Oil antibacterial and insecticidal
<i>Karanja</i> - bark	39		
<i>Karkandhu</i> - paste	52	<i>Ziziphus mauritiana</i>	Soothing effect, antibacterial, antidote to poisons
<i>Karkandhu</i> - seed	32		
<i>Katphala</i>	24	<i>Myrica esculenta</i>	Bark extract antiseptic
<i>Katvanga</i>	72	<i>Ailanthus excelsa</i>	Anthelmintic, antibacterial
<i>Khadiira</i>	22	<i>Acacia catechu</i>	Antibacterial, antifungal
<i>Krishna</i>	72	<i>Piper nigrum</i>	Oleoresin antibacterial/antifungal, alkaloid piperin is insecticidal

continued

Table 1. continued

Material	Verses	Latin names of plants	Properties
<i>Kubera</i>	15	?	'
<i>Kuberakshi</i>	29	<i>Caesalpinia crista</i>	Seed oil antimicrobial, leaves and bark anthelmintic
<i>Kulmasha/Kulmashuka</i>	12, 49	<i>Cassia absus</i>	Seed antimicrobial and contains mucilage
<i>Kumudvati</i> - flowers	54	<i>Nymphaea</i> sp.	'
<i>Kunapa</i>	13, 52, 62, 68		Effects would include healthy crop tree; crop tolerance to abiotic stresses such as frost, heat etc., as well as to insect pests and diseases, high yields; high quality produce
<i>Kushia</i>	74	<i>Saussurea lappu</i>	Antiseptic, insecticidal
<i>Madhu Madhuka</i>	24, 53	<i>Madhuca indica</i>	Oilcake insecticidal and piscicidal, contains saponin (mowrin), flowers antibacterial
<i>Madhuka</i> powder	58		Provide phosphorus (?)
Marrow	13, 52		
<i>Marudbhava</i>	23	<i>Athagi pseudathagi</i> ?	
<i>Masha</i>	53	<i>Vigna mungo</i>	Seed contains phosphorus and iron, ferritins bind polluting minerals
Milk	18, 26, 33, 43, 44, 46, 48, 51, 54, 56-59, 64, 65, 68, 72-76		See cow milk
Mud	52, 55		
Mud from borrow pit	47		Biocontrol through soil microflora May possess better cementing properties
<i>Mudga</i>	53	<i>Ligna radiata</i>	Sprouting seeds produce antimicrobial phenols (?)
<i>Musta</i>	18, 41, 54	<i>Cyperus rotundus</i>	Antibacterial
<i>Naga</i>	14	<i>Mesua ferrea</i>	Seed oil antimicrobial
<i>Nagajithva</i>	54	<i>Eucoctema hyssapifolium</i>	Antidote to insect bites
<i>Vetra</i>	15	<i>Opuntia elatior</i> ?	

continued

Table 1. continued

Material	Verses	Latin names of plants	Properties
Nimba - bark	21, 43	<i>Azadirachta indica</i>	Insecticidal, antibacterial, antiviral, anthelmintic, mildly antifungal
Nimbu	41	<i>Citrus aurantifolia</i>	Some antiseptic property
Nirgundika	11, 15, 50	<i>Vitex negundo</i>	Leaves insecticidal, antibacterial, seeds anthelmintic
Oil (not specified)	48, 69		Oils from mustard and sesame are biocidal
Oilcake	15		Presence of traces of oil; rich in nitrogen
Padma	51	<i>Nelumbo nucifera</i>	?
Padmaka	74	<i>Prunus cerasoides</i>	Exudes gum, bark contains flavonones and glycosides
Palasha	45	<i>Butea monosperma</i>	Antifungal, anthelmintic, host for several insect pests
Panchashakha - leaves	11	?	?
Pathya	74	<i>Terminalia chebula</i>	Antibacterial properties
Pavanari	14	?	?
Plaksha	56	<i>Ficus lucescens</i>	Antimicrobial
Plaksha - bark	21, 27, 56		Antimicrobial
Priyangu - bark	72	<i>Aglaia elaeagnoides</i>	Some insecticidal activity
Rajani	72, 74	<i>Mallotus philippensis</i>	Antimicrobial
Rasna	14	<i>Vanda tessellata</i>	Antibacterial
Rodhra - bark	74, 75	<i>Symplocos racemosa</i>	Antibacterial
Rohsha - oil	23	<i>Cymbopogon schoenanthus</i>	Antimicrobial
Rohita	22	<i>Tecomella undulata</i>	Antifungal, anti-termite
Rohita - bark	21		
Sahachara	22	<i>Barleria cristata</i>	Antiseptic
Saptaparna - bark	21, 39	<i>Alstonia scholaris</i>	Anthelmintic, latex sticky, alkaloids present
Sarja	41	<i>Vateria indica</i>	Antibacterial
Sarpi/Sarpis	15, 18	<i>Sansevieria roxburghiana</i>	Rhizomes mucilaginous

continued

Table 1. continued

Material	Verses	Latin names of plants	Properties
<i>Shatapushpa/Shatapushpika</i>	14, 73	<i>Anethum sowa</i>	Dill-apiol synergistic with pyrethrums, anthelmintic
<i>Shepha</i>	15	?	?
<i>Shopha</i>	50	<i>Anethum sowa</i>	?
<i>Shri</i>	74	<i>Nelumbo nucifera</i>	See <i>kamala</i> - bulbs
<i>Siddhartha-Siddharthaka</i>	40, 41, 42, 72	<i>Brassica alba</i>	Insect antixenosis; antifungal, acaricidal, nematocidal, glucosinolate
<i>Siddhartha</i> - bark	43		smallbm "anti-insect" and "anti-nematode"; allyl isothiosinolate antifungal
<i>Sinduvara</i>	41	<i>Vitex negundo</i>	See <i>nurgandika</i>
<i>Sita</i>	17, 18, 34, 54, 56, 75	<i>Pueraria tuberosa</i>	Tuber extract antifungal
Sugar	70		Attracts ants that would reduce pests
Sugar - raw	44, 46, 65, 73		
<i>Tagara</i>	74	<i>Valeriana jatamansi</i>	Antibacterial; insect repellent
<i>Tarkari</i> - bark	72	<i>Premna obtusifolia</i>	Antibacterial
<i>Tila</i>	11, 26, 43, 49, 53, 54, 64, 65, 69, 70, 73, 74, 76	<i>Sesamum indicum</i>	Insecticidal and repellent, oil synergistic to pyrethrums; antioxidative
<i>Tila</i> - oil	74		lignins in seed; 17% protein; 800 mg per 100g calcium, phosphorus, and potassium, 14% iron(ash) - highest
<i>Tila</i> - paste	48, 65		
<i>Tila</i> - powder	49		
<i>Trikatu</i> (ginger, black pepper, long pepper)	40	<i>Zingiber officinale</i> , <i>Piper nigrum</i> , <i>Piper longum</i>	See <i>Kana</i> and <i>Krishna</i>
<i>Triphala</i>	29	<i>Emblca officinalis</i> , <i>Terminalia</i> <i>bellicica</i> , <i>Terminalia chebula</i>	See <i>Amla</i> - bark and <i>Pathya</i>
<i>Udumbara/Udumbari</i> - bark	21, 56	<i>Ficus glomerata</i>	Contains latex, bark 14% tannin, anti-bacterial (?)

continued

**Table 1. continued**

Material	Verses	Latin names of plants	Properties
<i>Ushra</i>	18, 54, 74	<i>Vetiveria zizanioides</i>	Anthelmintic
<i>Vacha</i>	40, 41, 72	<i>Acorus calamus</i>	Antibacterial
<i>Vacha</i> - bark	43		
<i>Vasa</i>	22, 23	<i>Adhatoda vasica</i>	Antibacterial, antifungal, antiviral, insecticidal, acaricidal, herbicidal
<i>Vasa</i> - bark	21		
<i>Vetasa</i> - bark	72	<i>Calamus rotang</i>	Anthelmintic
<i>Vida</i> (medicinal salt)	17		Antimicrobial
<i>Bidanga</i>	41, 72	<i>Embelia ribes</i>	See <i>Bidanga</i>
<i>Vidanga</i> - bark	43		
<i>Vidari</i>	54, 74	<i>Pueraria tuberosa</i>	See <i>sita</i>
<i>Vyaghri</i>	22-24	<i>Solanum surattense</i>	Antibacterial, antiviral
<i>Yava</i>	53, 73	<i>Hordeum vulgare</i>	Decoction of barley is mucilaginous
<i>Yava</i> - powder	68		

**Table 2. Description of symptoms in trees based on the imbalance of three humors by three scholars.**

	Surapala	Sarangadhara	Chakrapani Mishra
<b><i>Dasha</i> (Humor)</b>			
<i>Vata</i>	Trunks thin and crooked with knots, leaf galls, fruits hard, less juicy and sweet; leaf, flower, and fruit drop; leaf yellowing; seen on arid lands.	Trees tall, thin, short, 'sleepless', or partly conscious, no flowering or fruiting.	Trees small, slender, tall, sleepy, and faded, bear no, or very few, flowers or fruits.
<i>Pitta</i>	Leaf yellowing, premature flower, leaf, fruit drop, decay of flowers and fruits, seen at the end of summer.	Trees yellow, twigs drop repeatedly, premature fruiting, cannot bear the heat of the sun.	Trees slender, pale, whitish leaves; dehydrated flowers and branches, unseasonal fruiting; cannot stand heat of the sun.
<i>Kafa</i>	Delayed fruit bearing, leaves pale and smaller, premature and tasteless fruits, oozing without wounds, yellowing; seen in winter or spring	Leaves and branches very glossy, flowers and fruits well developed, trunks symmetrical, and all parts covered with creepers.	Only leaves and bark; whitish undersized flowers; slimy and tasteless fruits; new shoots delayed; encircled by creepers.

# Appendix





# Plant Index

Sanskrit name	Latin name	Chapter (Verse)
ajagandha	<i>Cleome gynandra</i> L.	IV 8
akhota	<i>Juglans regia</i> L.	IV 13
aksha	<i>Terminalia bellirica</i> (Gaertn.) Roxb.	III 9, 21
akshaka	<i>Ougeinia oojenensis</i> (Roxb.) Hochr	III 14
akshotaka,	<i>Aleurites moluccana</i> (L.) Willd	III 9; VII 5
alindala	(?)	IC 3
amalaki	<i>Emblia officinalis</i> Gaertn.	IX 44
ambu	<i>Pavonia odorata</i> Willd	III 8, VIII 11; IX 18, 24, 33, 35, 36, 49
ambuja	<i>Barringtonia acutangula</i> (L.) Gaertn.	III 18
amla(ka)/amlaki	<i>Emblia officinalis</i> Gaertn.	III 31, IV 20; VII 7, 9; VIII 29, 56
amlaka	<i>Oxalis corniculata</i> L.	IX 25
amra	<i>Mangifera indica</i> L.	III 9, 14; VII 4, 5, 26, 35; VIII 12; IX 2, 9
amrita	<i>Tinospora cordifolia</i> (Willd.) Hook.f. & Thomp.	VIII 23
anjana	<i>Hardwickia binata</i> Roxb.	IE 9
ankola	<i>Alangium salvifolium</i> (L.f.) Wango	III 23, IV 11, 13; VIII 47, 48, 49; IX 2, 3, 8, 10, 11, 15
apamarga	<i>Achyranthes aspera</i> L. var. <i>porphyrostachya</i> Hook.f	II 30, 31
aragvadhia	<i>Cassia fistula</i> L.	VIII 11, 39
arishia	<i>Sapindus emarginatus</i> Vahl	VIII 22, 39
arjuna	<i>Terminalia arjuna</i> (Roxb.) Wight & Arn.	IA 10, IE 13, III 9, 21; VIII 21, 27, 43, 64, 72, IX 23
arka	<i>Calotropis gigantea</i> Ait.	II 35, III 24
asana/ashana	<i>Pterocarpus marsipium</i> Roxb.	III 9, 14; VII 5; VIII 15
ashmantaka/kanchanara	<i>Bauhinia variegata</i> L.	IA 18, IE 6
ashoka	<i>Saraca asoca</i> (Roxb.) de Witte	III 9, 31; IV 22; VII 26, 30, 31; VIII 45
ashota (non-Sanskrit)	<i>Solanum erianthum</i> D Don. (?)	III 32
ashuvega	(?)	IC 2
ashvagandha	<i>Withania somnifera</i> (L.) Dunal	VIII 12, 14
ashvakarna	<i>Shorea robusta</i> Gaertn.f	VII 17
ashvamara	<i>Nerium oleander</i> L.	III 8
ashvattha(ka)	<i>Ficus religiosa</i> L.	III 17, 30
asitadala	?	IA 20
atasi	<i>Linum usitatissimum</i> L.	VIII 52
atimuktaka	<i>Hiptage benghalensis</i> (L.) Kurz	III 15

continued

Sanskrit name	Latin name	Chapter (Verse)
<i>ativisha</i>	<i>Aconitum heterophyllum</i> Wall. ex Royle	VIII 41
<i>badama</i>	<i>Prunus amygdalus</i> Batsch.	IV 13, 20
<i>badari/badara</i>	<i>Ziziphus mauritiana</i> Lamk	IA 11, 18; IB 5; II 27; III 21, 30; VII 23; IX 24
<i>hakula</i>	<i>Mimusops elengi</i> L.	III 9, 14, 29; IV 5; VII 31
<i>bandhuka</i>	<i>Pentapetes phoenicea</i> L.	III 29
<i>bhallata(ka)/ bhullata/bhullota</i>	<i>Semecarpus anacardium</i> L.f	II 26; VII 36; VIII 13, 40, 41, 72
<i>bharngi</i>	<i>Clerodendrum indicum</i> (L.) Kuntze	IA 20
<i>bhringaraka</i>	<i>Echipta prostrata</i> (L.) L.	II 33
<i>bibhitaka/bibhitaki</i>	<i>Terminalia bellirica</i> (Gaertn.) Roxb.	IE 4; III 23; VII 7; VIII 29; IX 18, 44
<i>bidanga/vadanga</i>	<i>Embelia ribes</i> Burm.f	IV 15; VII 17, 22, 27, 36, 38, 40; VIII 26, 29, 39, 40, 41, 43, 46, 49, 58, 64, 72, 74, 75; IX 13, 16, 17, 18, 21, 46
<i>byapura/ byaddhya</i>	<i>Citrus medica</i> L.	IE 5; III 15, 21, 31; IV 20; VII 22
<i>bilva</i>	<i>Aegle marmelos</i> (L.) Corr.	IA 13; IB 6; IE 13, III 14, VII 5, 21
<i>bimba</i>	<i>Coccinia grandis</i> (L.) Voigt	III 5, 17
<i>bodhi</i>	<i>Ficus religiosa</i> L.	IE 2
<i>brahmi</i>	<i>Bacopa monniera</i> (L.) Pennell	IC 3
<i>brihati</i>	<i>Solanum indicum</i> L.	IX 2
<i>chakra (type of nakha)</i>	see nakha	IX 36
<i>champa</i>	<i>Artocarpus heterophyllus</i> Lamk.(?)	IV 20; VII 5
<i>champaka</i>	<i>Michelia champaca</i> L.	IE 5; III 7, 9, 14, 15, 29; IV 4, 5, 22, VII 17; IX 29
<i>chandraka</i>	(?)	III 17
<i>chara</i>	<i>Buchanania lanzan</i> Spreng.	VIII 32
<i>chinha</i>	<i>Tamarindus indica</i> L.	II 26; III 9, 14, 21, 30; IV 4, 20
<i>chinchini</i>	<i>Tamarindus indica</i> L.	IX 24
<i>chuta</i>	<i>Mangifera indica</i> L.	VII 28
<i>dadumi dadima</i>	<i>Punica granatum</i> L.	IE 5; III 9, 17, 31; IV 20; VII 6, 7, 8, 35; VIII 38
<i>dala tree</i>	(?)	IX 5
<i>dani</i>	<i>Baliospermum montanum</i> (Willd.) Muell.-Arg.	IA 20; IC2
<i>dhartura (dhattura)</i>	<i>Datura metel</i> L.	VIII 73
<i>dhatri</i>	<i>Embelia officinalis</i> Gaertn	II 37, III 10; VII 26
<i>dhava</i>	<i>Anogeissus latifolia</i> (DC.) Wall. ex Bedd.	IE 13; II 26; III 10; VIII 72; IX 32
<i>draksha</i>	<i>Vitis vinifera</i> L.	III 17, 33; VII 16; IX 46
<i>durva</i>	<i>Cynodon dactylon</i> (L.) Pers.	IA 17; IB 7; IE 14, 15

continued

Sanskrit name	Latin name	Chapter (Verse)
edukivya (?)	(?)	IC 3
ela	<i>Elettaria cardamomum</i> Maton	III 18; IX 33, 36
eranda	<i>Ricinus communis</i> L.	III 23, IX 25
garuda	(?)	IC 2
ghana	<i>Cyperus rotundus</i> L. (?)	VIII 21, IX 27, 33, 36
guduchi	<i>Tinospora cordifolia</i> (Willd.) Hook.f. & Thomp.	II 30, 31
guggula	<i>Commiphora wightii</i> (Aronot) Bhandari com. nov.	VIII 15, 34
gulala	(?)	III 16, 29
gundraka	<i>Typha australis</i> Schum. & Thonn.	IC 3
gunja	<i>Abrus precatorius</i> L.	VII 17; IX 41
hanu (type of nakha)	see nakha	IX 36
haridra	<i>Curcuma domestica</i> Val.	VII 17, IX 45
haridra tree	<i>Adina cordifolia</i> (Roxb.) Hook. F. ex Brandis	IA 19; III 21
harital	<i>Cynodon dactylon</i> (L.) Pers.	IV 8
haritaki	<i>Terminalia chebula</i> Retz.	VII 7; VIII 29; IX 18, 44
hayari	<i>Thevetia peruviana</i> (Pers.) K. Schum.	IX 27
hemasumana	<i>Michelia champaca</i> L. (?)	III 29
lingu(lu)	<i>Ferula assafoetida</i> L.	VIII 43, IX 31
indra	<i>Citrullus colocynthis</i> (L.) Kuntze	IB 4
indrabiya	<i>Citrullus colocynthis</i> (L.) Kuntze	VII 36
ingudi(ka)	<i>Balanites aegyptiaca</i> (L.) Delile	III 10; VIII 29, 44
jambala	<i>Citrus aurantium</i> L. var. <i>bergamia</i> Risso	VII 26, VIII 18
jambhira jambhira	<i>Citrus limon</i> (L.) Burm.f.	III 15, 31
jambu	<i>Syzygium cumini</i> (L.) Keels	IA 11; IE 4, 14; II 26; III 8, 14, 21, 31; IV 4; VII 26
japa	<i>Hibiscus rosa-sinensis</i> L.	III 16, 29
jata	<i>Nordostachys jatamansi</i> (D Don) DC.	IX 36
jati	<i>Jasminum grandiflorum</i> L.	IE 5; III 16; IV 22, IX 35, 36, 38
jatila	<i>Nordostachys jatamansi</i> (D. Don) DC	III 30
jaya	(?)	IX 33
jvantika	<i>Tinospora cordifolia</i> (Willd.) Hook.f. & Thomp.	IX 42
jyotishmati	<i>Cardiospermum halicacabum</i> L.	IC 2
kadal	<i>Musa paradisiaca</i> L.	II 34; VII 29, 37; IX 15
kadamba	<i>Anthocephalus cadamba</i> (Roxb.) Miq	IE 14, III 31; VII 25
Katla	(?)	III 32
kakodumbarika/ kaka-udumbari	<i>Ficus hispida</i> L.f.	IA 13, IE 4

continued

Sanskrit name	Latin name	Chapter (Verse)
<i>kakubha/arjuna</i>	<i>Terminalia arjuna</i> (Roxb.) Wight & Arn.	IB 6, IE 13, II 37
<i>kala</i>	<i>Rubia cordifolia</i> L. sensu Hook.f (?)	III 31
<i>kali</i>	<i>Holarthra antidyenterica</i> (L.) Wall.ex DC	IA 14
<i>kamala</i>	<i>Nelumbo nucifera</i> Gaertn.	III 15, 31; VIII 55
<i>kamalakha</i>	(?)	VII 26
<i>kampilla</i>	<i>Mallotus philippensis</i> (Lamk.) Muell.-Arg.	IA 14
<i>kamu</i>	<i>Emblia officinalis</i> Gaertn.	III 14
<i>kana</i>	<i>Piper longum</i> L.	II 29; VIII 14
<i>kanakaphala</i>	<i>Commiphora wightii</i> (Arnott) Bhandari com. nov.	II 38
<i>kanavira (karavira)</i>	<i>Nerium oleander</i> L.	III 29; IX 1
<i>kanchanara</i>	<i>Bauhinia variegata</i> L.	IE 6; III 14, 21
<i>kanda</i>	<i>Amorphophallus campanulatus</i> (Roxb.) Bl.ex Dcne.	IX 33
<i>kankata</i>	<i>Abutilon indicum</i> (L.) Sweet	VIII 30
<i>kanta</i>	<i>Porana paniculata</i> Roxb.	III 5
<i>kantakari</i>	<i>Solanum surattense</i> Burm f	IB 4
<i>kapali</i>	<i>Embelia ribes</i> Burm f	IX 32
<i>kaputha</i>	<i>Limonia acidissima</i> L.	IA 16, III 14, 30, 33; VII 21
<i>karabha</i>	<i>Echinops echinatus</i> Roxb. (?)	III 10
<i>karaha</i>	<i>Randia spinosa</i> Poir.	III 30
<i>karaka</i>	<i>Capparis decidua</i> (Forsk.) Edgew	III 30
<i>karaila(karavella ?)</i>	<i>Hemidesmus indicus</i> (L.) Schult.(?)	IX 3
<i>karamardaka/karamardaki</i>	<i>Carissa carandas</i> L.	III 15, 30, 33
<i>karanya(ka)</i>	<i>Pongamia pinnata</i> (L.) Pierre	IA 15; III 21; VIII 39, 41
<i>karira</i>	<i>Capparis decidua</i> (Forsk.) Edgew	IB 2, 6
<i>karkandhu</i>	<i>Ziziphus mauritiana</i> Lamk.	IB 6; VII 25; VIII 32, 52
<i>karkarika</i>	(?)	IX 23
<i>karni</i>	<i>Citrus karna</i> Raf (?)	III 15, 29; IV 20
<i>karukara</i>	<i>Pterospermum acerifolium</i> Willd.	IA 21, III 15
<i>karpasi(ka)</i>	<i>Gossypium herbaceum</i> L.	VII 8, 23, IX 30, 42, 43, 44, 45
<i>karpuraharidra</i>	<i>Curcuma amada</i> Roxb.	IX 45
<i>kasa/kasi</i>	<i>Saccharum spontaneum</i> L.	IX 25, 45
<i>kataka</i>	<i>Strychnos potatorum</i> L.f.	II 37
<i>kaiphala</i>	<i>Myrica esculenta</i> Buch.-Ham. Ex D.Don	VIII 24
<i>katvanga</i>	<i>Ailanthus excelsa</i> Roxb.	VIII 72
<i>kaukshta</i>	(?)	VIII 13
<i>keshara</i>	<i>Mammea longifolia</i> Planch. & Triana	VII 17

continued

Sanskrit name	Latin name	Chapter (Verse)
ketaka/ketaki	<i>Pandanus odoratissimus</i> L. f	III 8, 16, 29, VII 33
khudira	<i>Acacia catechu</i> (L. f.) Willd.	II 26, 36, 38, III 10; VIII 22, IX 32
kharika	<i>Phoenix dactylifera</i> L.	IV 13
kharjuri/kharjura	<i>Phoenix dactylifera</i> L.	IA 21, IE 4, III 30; IV 13, VII 5
kinshukafni	<i>Butea monosperma</i> (Lamk.) Taubert	III 29, IX 23, 30
kodrava tree (?)	<i>Paspalum scrobiculatum</i> L.	VII 20
kokilasya	<i>Hypophila uriculata</i> (Schum.) Heine	IC 3
kola	<i>Ziziphus mauritiana</i> Lamk	IA 12, 21, III 9, VII 27, 30, 42, IX 25
koshataki	<i>Luffa acutangula</i> (L.) Roxb.	VII 19
krishna	<i>Piper nigrum</i> L.	VII 17, 19; VIII 72
kshiri	<i>Manilkara hexandra</i> (Roxb.) Dubard	III 14
kuhera	(?)	VIII 15
kubera	<i>Caesalpinia crista</i> L.	VI 5; VIII 29
kubja/kubjaka	<i>Rosa brunonii</i> Lindl.	IE 5, III 16, 29
kulattha	<i>Dolichos uniflorus</i> Lam.	II 27, VII 8, IX 23
kulmasha(ka)	<i>Cassia absus</i> L.	VIII 12, 49
kumkum	<i>Crocus sativus</i> L.	III 18
kumuda	<i>Nymphaea nouchali</i> Burm.f.	IX 1, 11
kumudvati	<i>Nymphaea</i> sp.	VIII 54
kunchika	<i>Nigella sativa</i> L.	IX 18
kunda	<i>Jasminum multiflorum</i> (Burm.f.) Andr.	III 16, 29
kunduru	<i>Boswellia serrata</i> Roxb. Ex Colebr.	IX 29
kurabaka	<i>Barleria cristata</i> L.	III 29
kusha	<i>Desmostachya bipinnata</i> (L.) Stapf	IA 17, IB 7; IE 14
kushmanda(ka)	<i>Benincasa hispida</i> (Thunb.) Cogn.	IX 6, 7, 37
kushla	<i>Saussurea lappa</i> C B Clarke	VII 40, 44, VIII 74, IX 32, 33, 36, 40, 44
kutaja	<i>Wrightia tinctoria</i> R. Br.	IE 14
lakshmana	<i>Ipomoea sepiaria</i> Roxb. (?)	IA 20; IC 3
lakucha	<i>Artocarpus lakoocha</i> Roxb.	III 8, 32, IV 20; VII 5, 26, 27
loha	<i>Aquilaria malaccensis</i> Lamk.	II 37
machakunda	<i>Pterospermum canescens</i> Roxb.	III 29
madhuka/madhu	<i>Madhuca indica</i> J.F Gmel	IA 15; III 8, 9, 14; VII 5, 19, 20, 21, 27, 44; VIII 24, 53, 58, IX 2, 16, 40, 41
mahanimba	<i>Melia azedarach</i> L.	IB 11; IE 14, III 9
malati	<i>Jasminum grandiflorum</i> L.	III 29
malika (nava)	<i>Jasminum</i> sp	IA 20

continued

Sanskrit name	Latin name	Chapter (Verse)
malhika	<i>Jasminum sambac</i> (L.) Ait	III 16, VII 39; IX 35
malura	<i>Aegle marmelos</i> (L.) Corr.	III 30
mandara	<i>Erythrina variegata</i> L. <i>orientalis</i> (L.) Merr.	IX 37
manjishiha/manjishuka	<i>Rubia cordifolia</i> L. sensu Hook f (?)	IX 31, 42
marudbhava (marutsambhava)	<i>Alhagi pseudalhagi</i> (Bieb.) Desv (?)	VIII 23
mashu	<i>Vigna munga</i> (L.) Hepper	IV 8, VII 9, 24, 32, 39, VIII 53
mashacchada	<i>Vigna</i> sp.	IC 3
mashuparni (?)	<i>Teramnus labialis</i> Spreng. (?)	IC 2
masi (mausi?)	<i>Nardostachys jatamansi</i> (D Don) DC	IX 33
methi	<i>Trigonella foenum-graecum</i> L.	VII 25
mrtdvi	<i>Vitis vinifera</i> L. (?)	III 32; IV 22
muchakunda	<i>Pterospermum canescens</i> Roxb.	III 8
mudga	<i>Vigna radiata</i> (L.) Wilczek	VIII 53
mulaka	<i>Raphanus sativus</i> L.	IX 12
munidru	<i>Sesbania grandiflora</i> (L.) Poir.	III 17
musta	<i>Cyperus rotundus</i> L.	II 37; VIII 18, 41, 54; IX 49
naga	<i>Mesua ferrea</i> L.	VIII 14
nagajihva	<i>Enicostema hyssopifolium</i> (Willd.) Verdoorn	VIII 54
nakha (shell of land snail?)	(?)	IX 33, 35
naktamala	<i>Cassia fistula</i> L.	IE 4
nala	<i>Phragmites karka</i> (Retz.) Trin. Ex Steud.	IC 3; II 30, 31
nahkera/nahkeri	<i>Cocos nucifera</i> L.	IA 17, IE 6, III 14, 31, IV 12, 13, VII 5
naringa/naranga	<i>Citrus aurantium</i> L.	III 15, 31; VII 24
navamalika	<i>Jasminum arborescens</i> Roxb	III 16
neepa (nupa)	<i>Anthocephalus cadamba</i> (Roxb.) Miq. (?)	IB 10, 12; IE 4
nematinepali or nevali?	<i>Barringtonia racemosa</i> (L.) Spreng (?)	IX 35
neira	<i>Ixora arborea</i> Roxb. Ex Sm.	VIII 15
nili(ka)	<i>Opuntia elatior</i> Mill. (?)	III 23, IX 45
nimba	<i>Indigofera articulata</i> Gouan	IB 9, II 30, 31; III 9; IV 22, VII 17; VIII 21, 43
nimbaka	<i>Azadirachta indica</i> A. Juss.	IE 5
nimbu(ka)	<i>Citrus limon</i> (L.) Burm. f	III 15, 30; VIII 41, IX 24
nirgundika	<i>Citrus aurantifolia</i> (Christm.) Swingle	VIII 11, 15, 50
nirmalika	<i>Vitex negundo</i> L.	III 29
nisha	<i>Strychnos potatorum</i> L. f.	II 29; IX 30, 42, 43, 44, 45
	<i>Curcuma domestica</i> Val.	

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Sanskrit name	Latin name	Chapter (Verse)
<i>nuta</i>	(?)	III 30
<i>nyagrodha</i>	<i>Ficus benghalensis</i> L.	IE 2
<i>padma</i>	<i>Nelumbo nucifera</i> Gaertn.	VIII 51
<i>padmaka</i>	<i>Prunus cerasoides</i> D.Don	VIII 74
<i>palala</i>	(?)	VII 18
<i>palasha</i>	<i>Butea monosperma</i> (Lamk.) Taubert	IA 12, 21, IB 8, IE 2, II 26, III 10, 17, 21; IV 14; VIII 45; IX 29, 43
<i>panasa/panasha</i>	<i>Artocarpus heterophyllus</i> Lamk.	III 14, 30, VII 5, 18
<i>panchashakha</i>	(?)	VIII 11
<i>panduraga</i>	<i>Artemesia sieversiana</i> Ehrh. Willd	III 15
<i>pankaja</i>	<i>Nelumbo nucifera</i> Gaertn.	VII 32
<i>paravata</i>	<i>Grewia subinaequalis</i> DC	III 33
<i>partha</i>	<i>Terminalia arjuna</i> (Roxb.) Wight & Arn.	IE 13, IX 24, 25
<i>patula</i>	<i>Stereospermum personatum</i> (Hassk.) Chait.	III 9, 30, VII 23
<i>pathya</i>	<i>Terminalia chebula</i> Retz.	VIII 74
<i>patola(ka)</i>	<i>Trichosanthes cucumerina</i> L.	IX 6
<i>pavanari</i>	(?)	VIII 14
<i>pavasa (palasha ?)</i>	<i>Butea monosperma</i> (Lamk.) Taubert	IE 14
<i>phalini</i>	<i>Lagenaria siceraria</i> (Molina) Standley (?)	IV 22
<i>phirasa</i>	(?)	III 30
<i>pichu</i>	<i>Azadirachta indica</i> A. Juss.	IE 14; IV 4
<i>pilu</i>	<i>Salvadora persica</i> L.	IB 3, 5, 6; IE 14
<i>pindaraka</i>	<i>Trewia nudiflora</i> L. (?)	IC 3
<i>pippala</i>	<i>Ficus religiosa</i> L.	III 9, 25
<i>pippali</i>	<i>Piper longum</i> L.	VIII 40
<i>pista (non-Sanskrit)</i>	<i>Pistacia vera</i> L.	III 32
<i>pitika</i>	<i>Curcuma domestica</i> Val. (?)	III 18; VII 23
<i>plaksha</i>	<i>Ficus lucescens</i> Blume (F. lacor Buch.-Ham.)	III 17, 25, VIII 21, 27, 56
<i>prityala</i>	<i>Buchanania lanzan</i> Spreng.	VII 4
<i>privangu</i>	<i>Aglaia elaeagnoides</i> (Juss.) Benth.	VII 17, 25, VIII 72
<i>puga</i>	<i>Areca catechu</i> L.	III 30; IV 12, 13
<i>punnaga</i>	<i>Calophyllum inophyllum</i> L.	III 7, 14, IV 22, VII 25
<i>rajudana(ka)</i>	<i>Manilkara hexandra</i> (Roxb.) Dub	II 37; III 7, 31, IV 4, 5, 20
<i>rajani(ka)</i>	<i>Mailotus philippensis</i> (Lamk.) Muell.-Arg	III 10; VIII 72, 74
<i>raji</i>	<i>Brassica nigra</i> (L.) Koch	IX 18
<i>rambha</i>	<i>Musa paradisiaca</i> L.	III 8, 19, 31

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Sanskrit name	Latin name	Chapter (Verse)
rasala	<i>Mangifera indica</i> L.	III 30; IV 20
rasna	<i>Vanda tessellata</i> (Roxb.) Hook. Ex G. Don	VIII 14
rishabhi	<i>Mucuna pruriens</i> (L.) DC	IX 25
rodhra	<i>Symplocos racemosa</i> Roxb.	VII 25, 26; VIII 74, 75, IX 30
rohisha	<i>Cymbopogon schoenanthus</i> (L.) Spreng.	VIII 23
rohita(ka)	<i>Tecomella undulata</i> (Smith) Seem.	IB 2, 5, 8, 9, III 30; VIII 21, 22
rudanti	<i>Capparis grandis</i> L.f.; <i>C. septeria</i> L.	IA 20; IC 2
sadaphala	<i>Citrus</i> sp.	III 15, 31
sadara	(?)	II 26
sahachara	<i>Barleria cristata</i> L.	VIII 22
sanyirika	(?)	III 30
sankola/unkola (?)	<i>Alangium salusifolium</i> (L.f.)	II 35
vaptaparna	<i>Alstonia scholaris</i> (L.) R Br	III 10; VIII 21, 39
sarja	<i>Vateria indica</i> L.	IE 13; VII 41
sarpi(s)	<i>Sansevieria roxburghiana</i> Schult. f.	VIII 15, 18
sarshapa	<i>Brassica campestris</i> L. var. <i>sarson</i> Prain	IV 11, VII 5
seva	<i>Malus punila</i> Mill	III 15
sevan	<i>Rosa alba</i> L. (?)	IB 29
shaku	<i>Tectona grandis</i> L.f.	IE 13, III 10
shala	<i>Shorea robusta</i> Gaertn. f.	III 30
shallaki	<i>Boswellia serrata</i> Roxb. Ex Colebr	III 10
shama	<i>Prosopis</i> sp.	IB 10
shami	<i>Prosopis cineraria</i> (L.) Druce	IB 8
shara/sara	<i>Erianthus munja</i> (Roxb.) Jesw	II 28, 38
sharivakha	<i>Hemidesmus indicus</i> (L.) Schult	IC 3
shatapatri	<i>Rosa centifolia</i> L.	IE 4, III 32
shatapushpi(ka)/ shatapushpa	<i>Anethum sowa</i> Kurz	IV 8; VI 5; VIII 14, 73
shepha	(?)	VIII 15
shephatika	<i>Cassia fistula</i> L.	VII 23
shigruka	<i>Moringa oleifera</i> Lam.	III 9
shikhandi	<i>Jasminum officinale</i> L.	III 16
shimpa/shimshapa	<i>Dalbergia sissoo</i> Roxb.	IB 12; IE 13
shipha	<i>Anethum sowa</i> Kurz.	VII 19
shivisha	<i>Albizia lebbek</i> (L.) Benth.	II 26; IV 22
shiva/shivani	<i>Prosopis cineraria</i> (L.) Druce (?)	IC 2; III 10

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Sanskrit name	Latin name	Chapter (Verse)
shleshmata	<i>Cordia dichotoma</i> var. <i>wallichii</i> (Cl.) Maheshwari	III 21
shona	<i>Oroxylum indicum</i> (L.) Benth. Ex Kurz	IA 14
shopha(ka?)	<i>Anethum sowa</i> Kurz.	VIII 50
shri	<i>Nelumbo nucifera</i> Gaertn.	VIII 74
shrikhandi(ka)	<i>Santalum album</i> L.	III 8, 17, 29
shringavera	<i>Zingiber officinale</i> Rosc.	III 18
shriparni	<i>Gmelina arborea</i> L.	IE 13
shyama	<i>Ichnocarpus frutescens</i> (L.) Ait. & Ait.	IC 2; III 15
siddhartha(ka)	<i>Brassica alba</i> (L.) Koch	II 30, 31; III 23; VII 17, 37, 43; VIII 40, 41, 42, 43, 72
sindurika	<i>Bixa orellana</i> L.	III 29
sinduvata	<i>Vitex negundo</i> L.	IA 12; IE 4; III 17, VII 39; VIII 41
sira	<i>Citrus aurantium</i> L.	IX 25
sita	<i>Pueraria tuberosa</i> (Roxb. Ex Willd.) DC (?)	VIII 17, 18, 34, 54, 56, 75; IX 40
sunhi	<i>Euphorbia nerifolia</i> auct. Pl. non L.	III 17
sriphala (shriphala)	<i>Aegle marmelos</i> (L.) Corr.	II 38; III 30
sunhi	<i>Zingiber officinale</i> Rosc.	VII 40
surana	<i>Amorphophallus campanulatus</i> (Roxb.) Blex Dene.	III 18
surataru	<i>Cedrus deodara</i> (Roxb.) Loud. (?)	III 10; VIII 74
tagara	<i>Valeriana jatamansi</i> Jones	VIII 74; IX 33, 35
tala	<i>Borassus flabellifer</i> L.	IA 17; IE 6; III 14, 30
tambulika/tambula	<i>Piper betle</i> L.	III 16, 32
tapodhana	<i>Sphaeranthus indicus</i> L.	IX 25
tarala	(?)	III 16
tarkari	<i>Premna obtusifolia</i> R.Br.	VIII 72
taruni	<i>Jasminum flexile</i> Vahl	III 16
tila	<i>Sesamum indicum</i> L.	IV 8, 10; VII 5, 17, 23, 25, 26, 27, 38, 39; VIII 11, 26, 43, 48, 49, 53, 54, 64, 65, 69, 70, 73, 74, 76; IX 39, 42, 43, 45
tilaka	<i>Wendlandia exserta</i> (Roxb.) DC	IA 17; III 14; VII 31
tinduka	<i>Diospyros melanoxylon</i> Roxb.	II 30, 31; III 10; IV 4; VII 4
tinduki	<i>Diospyros exculpta</i> Buch.-Ham.	II 26
trinadru	(?)	VII 29
trinaraaja	<i>Cocos nucifera</i> L.(?)	IV 13
trivrit(a)	<i>Operculina turpethum</i> (L.) Silva-Manso	IA 20; IC2
udumbari/udumbara	<i>Ficus glomerata</i> Roxb	IA 9, 13; IE 2, 4, 9; III 9, 25, 30; IV 4; VIII 21, 56;
udumbarika/audumbari		IX 41

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Sanskrit name	Latin name	Chapter (Verse)
unmatta	<i>Datura metel</i> L.	VII 39
ushira	<i>Veriveria zizanioides</i> (L.) Nash	II 37; VIII 18, 54, 74; IX 27, 33, 35, 36, 49
vacha	<i>Acorus calamus</i> L.	VII 17, 18, VIII 40, 41, 72; IX 45
vaikankata	<i>Gymnosporia spinosa</i> Merr. & Rolfe	VIII 30
vamsha	<i>Bambusa arundinacea</i> (Retz.) Willd.	III 10, 17, 30, 33; IV 4
vanfulaka	<i>Salix tetrasperma</i> Roxb.	II 26
varahi	<i>Dioscorea bulbifera</i> L.	IC 2; IX 18
vartaka	<i>Solanum melongena</i> L.	IX 6, 7
vasa	<i>Adhatoda vasica</i> Nees	VIII 21, 22, 23
vasantika	<i>Jasminum officinale</i> L.	III 29
vata	<i>Ficus benghalensis</i> L.	IE 4; III 9, 17, 25, 30; IV 4
vatarika	<i>Allium sativum</i> L. (?)	VII 39
vetasa	<i>Calamus rotang</i> L.	IE 6; VIII 72
vidama	<i>Prunus amygdalus</i> (?)	III 15, 32
vidari(ka)	<i>Pueraria tuberosa</i> (Roxb. Ex Willd.) DC	III 18; VIII 54, 74; IX 28
vira	<i>Terminalia arjuna</i> (Roxb.) Wight & Arn.	IV 4
virana	<i>Veriveria zizanioides</i> (L.) Nash	IC 1
vyaghrapadi	<i>Flacourtia indica</i> (Burm.f.) Merr.	IC 2
vyaghri	<i>Solanum surattense</i> Burm.f.	VIII 22, 23, 24
yashii (yashtimadhu)	<i>Glycyrrhiza glabra</i> L.	VII 23, 44; IX 16, 17, 40, 45
yava	<i>Hordeum vulgare</i> (L.) emend. Bowden	VII 36, 38, 39; VIII 53, 68, 73; IX 16, 39, 42, 43, 46
yuthika	<i>Jasminum auriculatum</i> Vahl.	III 29; IX 33







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